6070A
6071A

Synthesized RF Signal Generators

Schematic Manual

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JANUARY 1982
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FLUKE®

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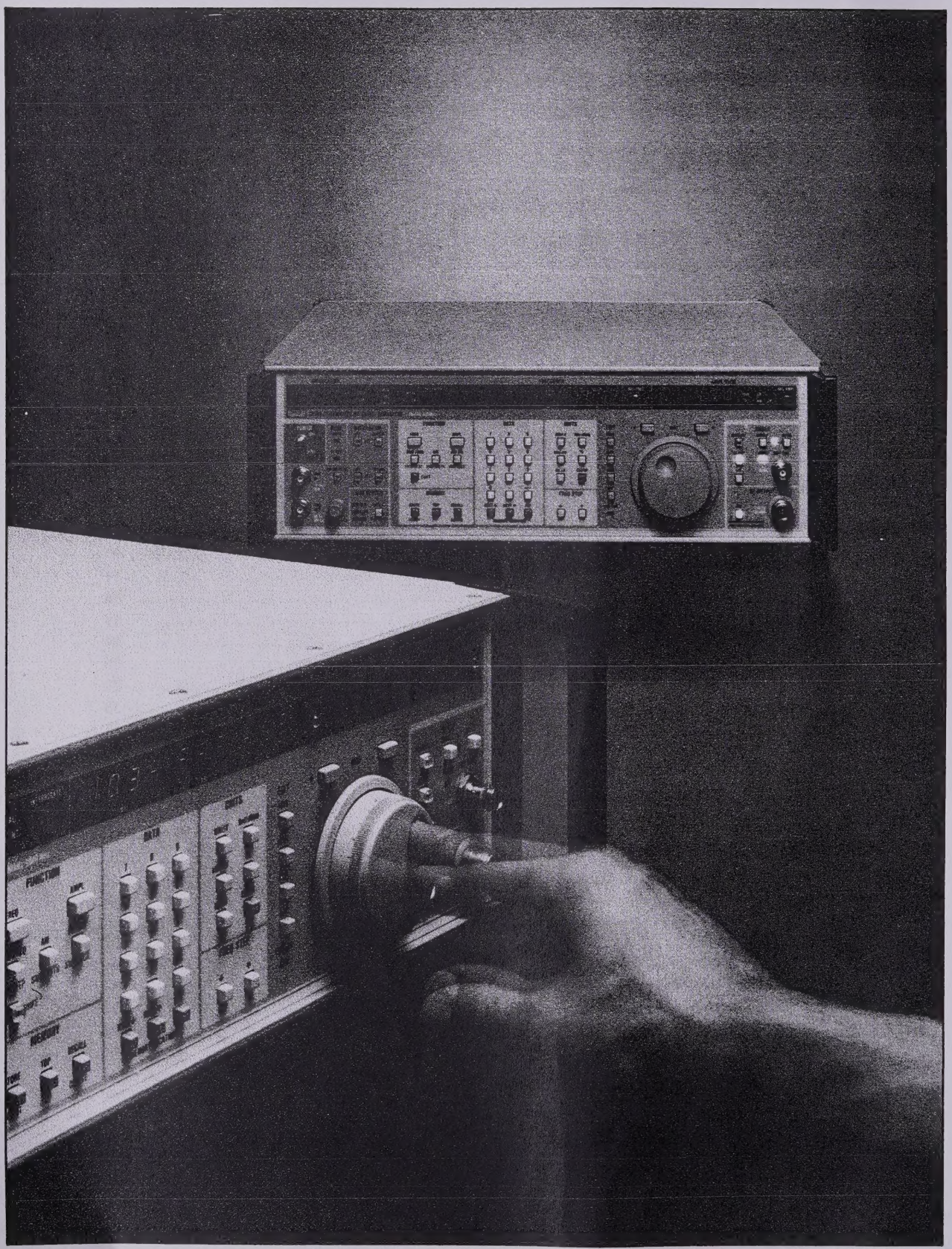

6070A/6071 Synthesized RF Signal Generators

Introduction

THE 6070A/6071A INSTRUCTION MANUAL SET

The John Fluke Models 6070A and 6071A RF Synthesized Signal Generators are documented by a set of four manuals: the 6070A/6071A Operator Manual, the 6070A/6071A Calibration Manual, the 6070A/6071A Service Manual, and the 6070A/6071A Schematic Manual (Figure 1). The 6070A/6071A Operator Manual introduces the operator to the instrument; familiarizes the operator with all instrument controls, connectors, and indicators; and presents detailed operating information and procedures for both manual (local) and systems (remote) operation. The 6070A/6071A Calibration Manual provides procedures for general maintenance, performance checks, and calibration adjustments. The 6070A/6071A Service Manual contains a description of theory of operation, Schematic Manual contains Mnemonics, System Block Diagram, Wiring Diagram and Schematics.

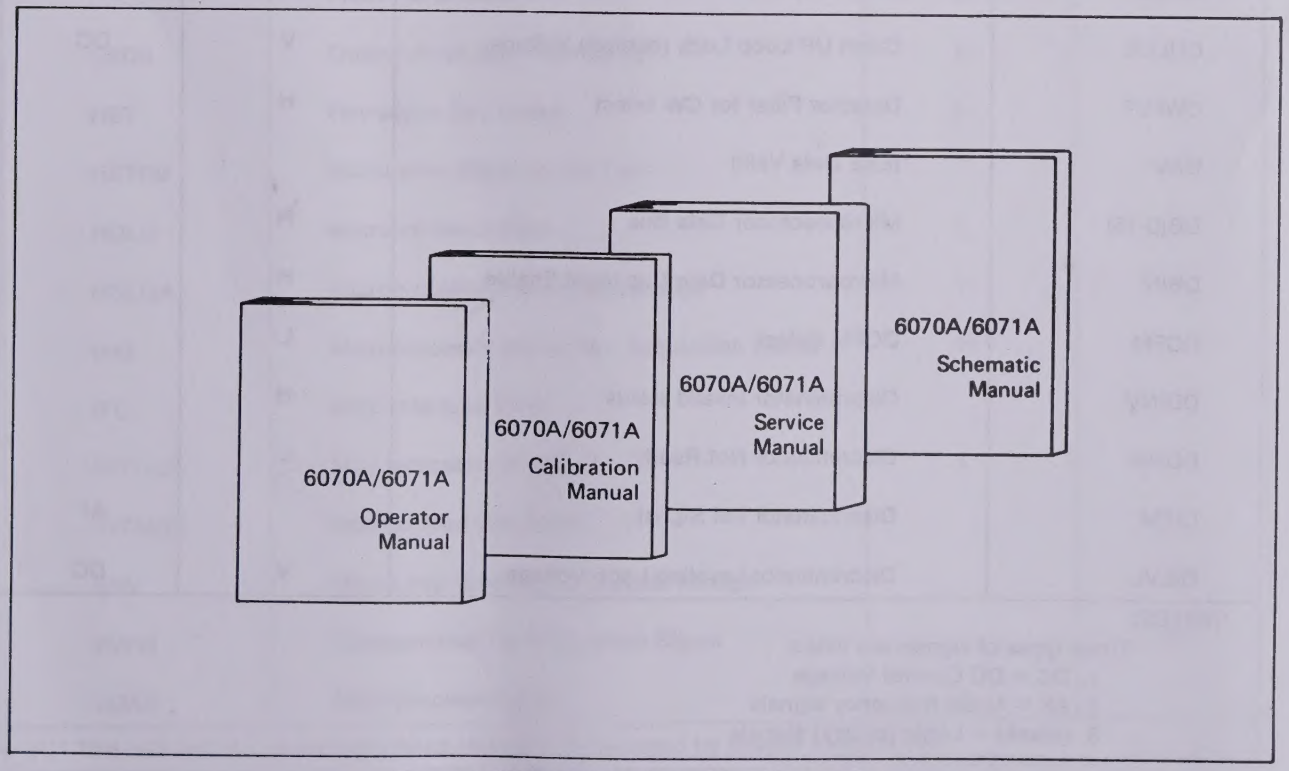

Figure 1. 6070A/6071A Instruction Manual Set

MNEMONICS	DEFINITION	SIGNAL LEVEL	TYPE*
AB(0-14)	Microprocessor Address Bus	H	
AM/ALC	AM and Level Control Voltage	V	DC
ASW (0-7)	Address Switch Bits		
ATN	Attention		
A6DB	Attenuator, 6 dB Section Select	L	
A12DB	Attenuator, 12 dB Section Select	L	
A24(1-5)	Attenuator, 24 dB Section Select	L	
BAB(0-5)	Buffer Address Bits	H	
BAND(1,2,4)	MOD-DIV Band Select	H	
BDTA	Buffer Data	H	
BSEL (2,3,5,6)	Buffer Select Bits		
CRUCLK	Microprocessor CPU Clock	H	
CRUIN	Microprocessor CPU Data into CPU	H	
CRUOUT	Microprocessor CPU Data out of CPU	H	
CULC	Clean Up Loop Compensation Voltage	V	DC
CULLK	Clean UP Loop Lock (control) Voltage	V	DC
CWFLT	Detector Filter for CW select	H	
DAV	IEEE Data Valid		
DB(0-15)	Microprocessor Data Bus	H	
DBIN	Microprocessor Data Bus Input Enable	H	
DCFM	DCFM Select	L	
DDINV	Discriminator Invalid status	H	
DDNR	Discriminator Not Ready	L	
DIFM	Discriminator FM Signal		AF
DILVL	Discriminator Leveling Loop Voltage	V	DC

*NOTES:

Three types of signals are listed:

1. DC = DC Control Voltage
2. AF = Audio frequency signals
3. (blank) = Logic (binary) signals

Figure 2. Mnemonics

MNEMONICS	DEFINITION	SIGNAL LEVEL	TYPE*
DIMOD	Discriminator Modulation Enable	H	
DI0(1-8)	IEEE		
DIRN(0-2)	Discriminator FM Range Select	H	
DIUNL	Discriminator Unlocked Status	L	
DLINT	Front Panel Rotary Knob Interrupt	L	
DLLFT	Front Panel Rotary Direction		
EOI	IEEE End or Identity		
EXTLK	External Reference Phase Lock Mode Select	H(1)*	
FAB(0-5)	Front Panel Address Bits	H	
FDTA	Front Panel Data	H	
FIN	Front Panel Data	H	
FIX10	Fixed 10 MHz Select	H	
FLSL(1-2)	Doubler Filters Select	H	
FMUX	Front Panel Multiplex	L	
FSEL	Front Panel Select	L	
G6DB	Output Ampl, 6dB Gain Select	H	
HET	Hetrodyne Osc Select	L	
HETFM	Modulation Signal to Het Osc		AF
HOLD	Microprocessor Hold	L	
HOLDA	Microprocessor Hold Acknowledge	H	
IAQ	Microprocessor instruction Acquisition Status	H	
IFC	IEEE Interface Clear		
INT(1-2)	Microprocessor Interrupt	L	
INTAUD	Internal Mod Osc Signal		AF
KNV	Main Loop Gain Compensation Voltage		DC
KVFM	Compensated FM Modulation Signal		AF
LOAD	Microprocessor Load	L	

(1)* This is "Low" (L) when "wide-band reference" is selected by special function 61.

Figure 2. Mnemonics (cont)

MNEMONICS	DEFINITION	SIGNAL LEVEL	TYPE*
LOHET	Low Het Select	H	
MAB(0-3)	Mod Osc Address Bits	H	
MEMEN	Microprocessor Memory Enable	L	
MDTA	Mod Osc Data	H	
MDTST	Mod Distribution Test Bit	H	
MLLK	Main Loop Lock (control) Voltage		DC
M1SL(2,3)	Mod Osc Select	L	
NAB(0-2)	N/1 Address Bits	H	
NDAC	IEEE Not Data Accepted		
NDTA	N/1 Data	H	
NSEL (0-2)	N/1 Select Bits	L	
NRFD	IEEE Not Ready for Data		
NVMEN	Nonvolatile Memory Select	L	
NVOP	Nonvolatile Memory installed	L	
N1TST	N/1 Test Bits	H	
ON/STANDBY	On/Standby Switch Signal		
OTVAL	Output Valid Signal	H	
PDFM	Phase Det FM signal		AF
PDMOD	Phase Det FM Select	H	
PDRN(0-1)	Phase Det FM Range Select	H	
PHERRV	Phase Error Voltage		DC
PHMOD	Phase Det 0M Select	L	
PHV	Phase Shifter DAC Voltage	DC	
PI	Discriminator Phase Shifter $\pi/2$ Bit	H	
PI2	Discriminator Phase Shifter $\pi/2$ Bit	H	
PNLFT	Penlift Signal	H	
PTTL	Phase 2 TTL Clock	L	
READY	Microprocessor Ready	H	

Figure 2. Mnemonics (cont)

MNEMONICS	DEFINITION	SIGNAL LEVEL	TYPE*
REF	DAC Reference Voltage (10V)		DC
RESET	Microprocessor Reset	L	
RNULK	10 MHz Reference Unlock Status	L	
RPD	Reduce Peak Deviation Status	H	
RPRST	Reverse Power Protect Reset	L	
RPTRPL	Reverse Power Protect Tripped	L	
SAB(0-2)	Sub Synth Address Bits	H	
SDIN	Synthesizer Distribution Data (status)	H	
SDMUX	Synth Distribution Multiplex (select)	L	
SDTA	Sub Synth Data	H	
SRQ	IEEE Service Request		
SSEL (0-2)	Sub Synth Select Bits	L	
SSPDV	Sub Synth Phase Detector (loop) Voltage		DC
SSULK	Sub Synth Unlocked Status	L	
STDBY LIGHT	Standby Light		
STDXO	Standard Crystal Oscillator Select	H(2)*	
STST	Sub Synthesizer Test Bit		
TMCNT	N/1 Timing Control	H	
UNLVL	Output Amplifier Unleveled Status	H	
VAR1O	Variable 10 MHz (DCFM) Select	L	
VCOFM	VCO FM Signal		AF
VCO	VCO Select	H	
WAIT	Microprocessor Wait	H	
WE	Microprocessor Enable	L	
X20P	6071 Configuration Status	H	
X2SL	Doubler Select	H	
1+AM	Level Control Reference Voltage		DC

(2)* This is set "Low" (L) by setting A3A2S1 to Option 130 when Option 130 is installed.

Figure 2. Mnemonics (cont)

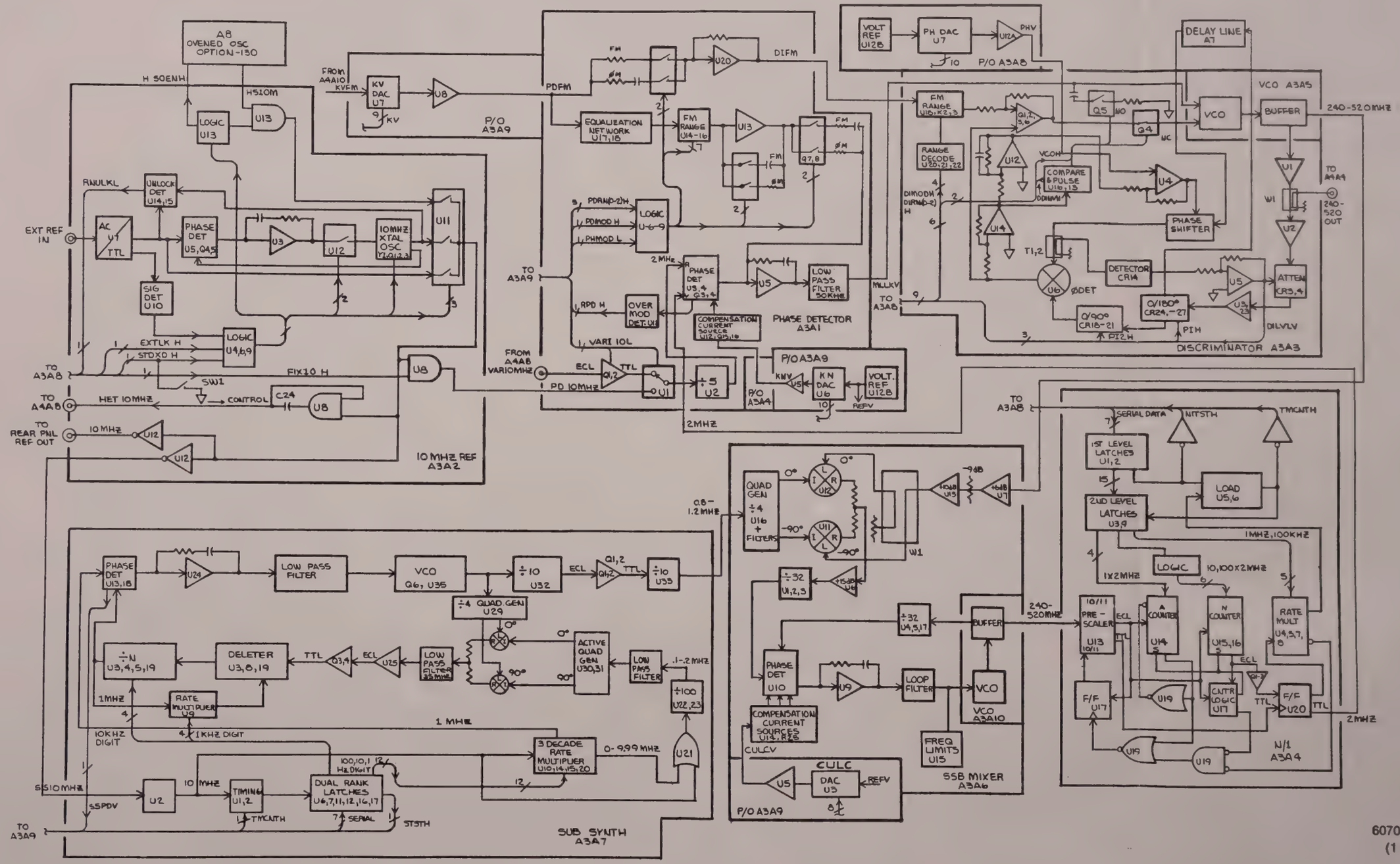

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Figure 3. System Block Diagram

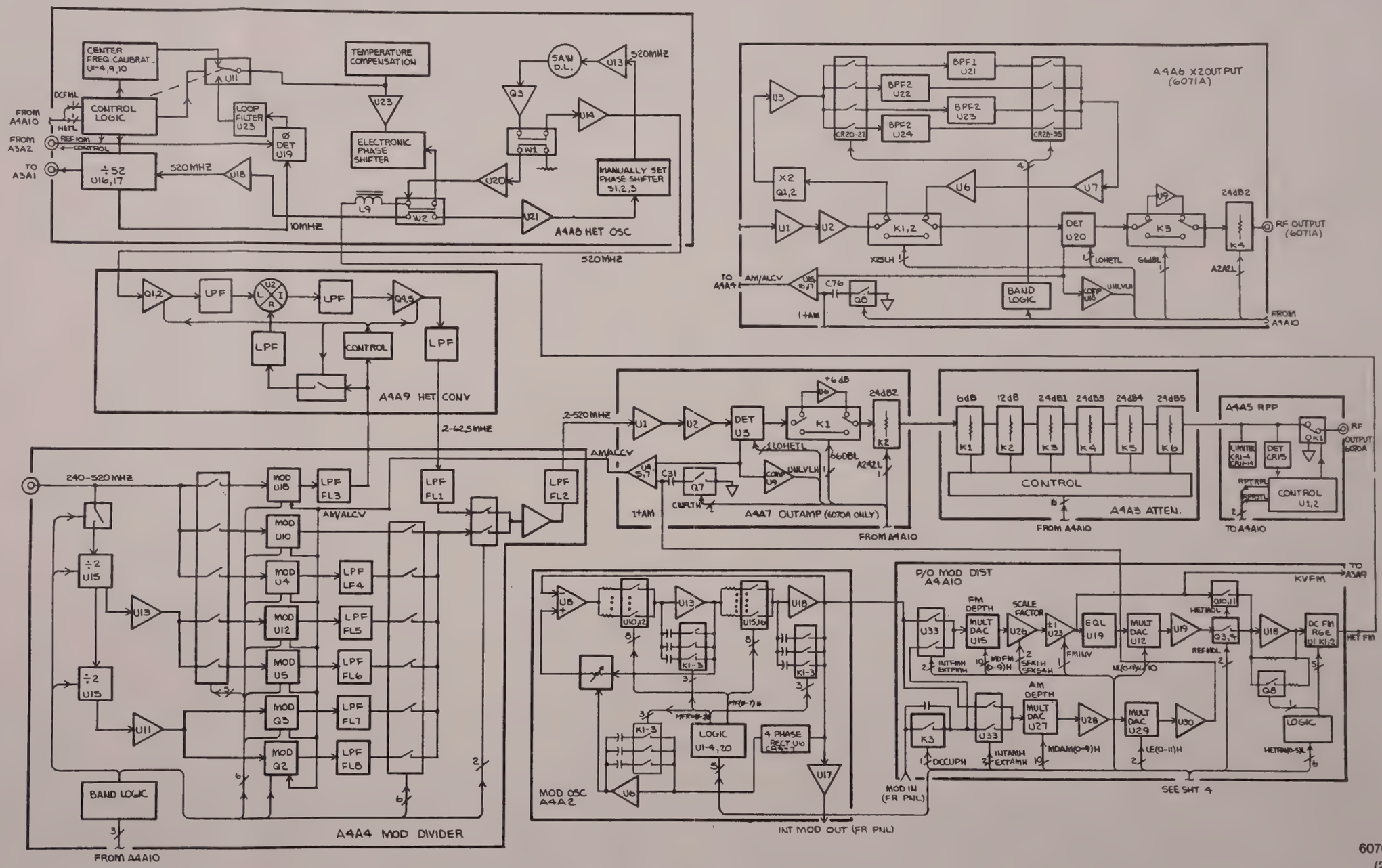

Figure 3. System Block Diagram (cont)

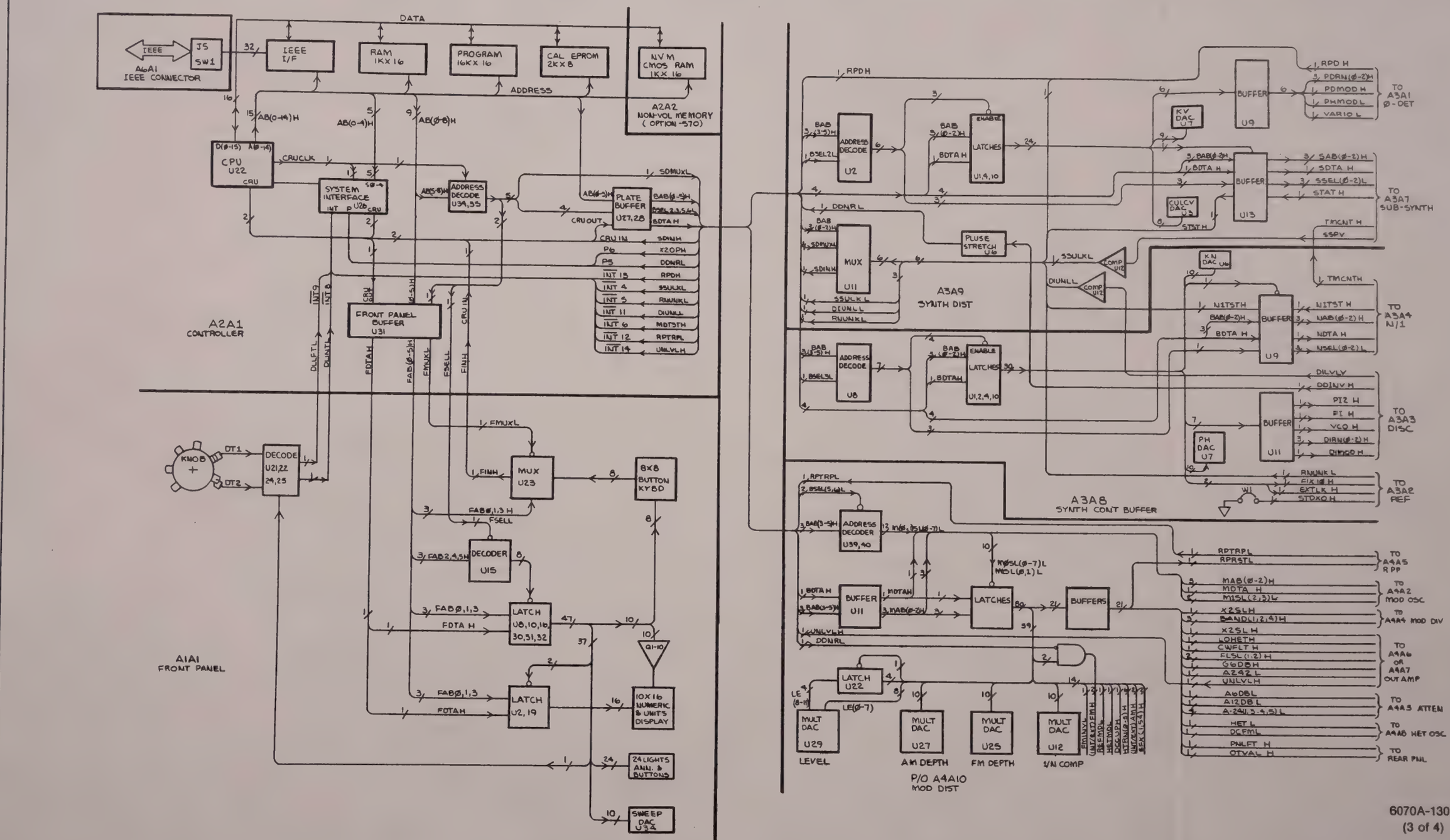

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Figure 3. System Block Diagram (cont)

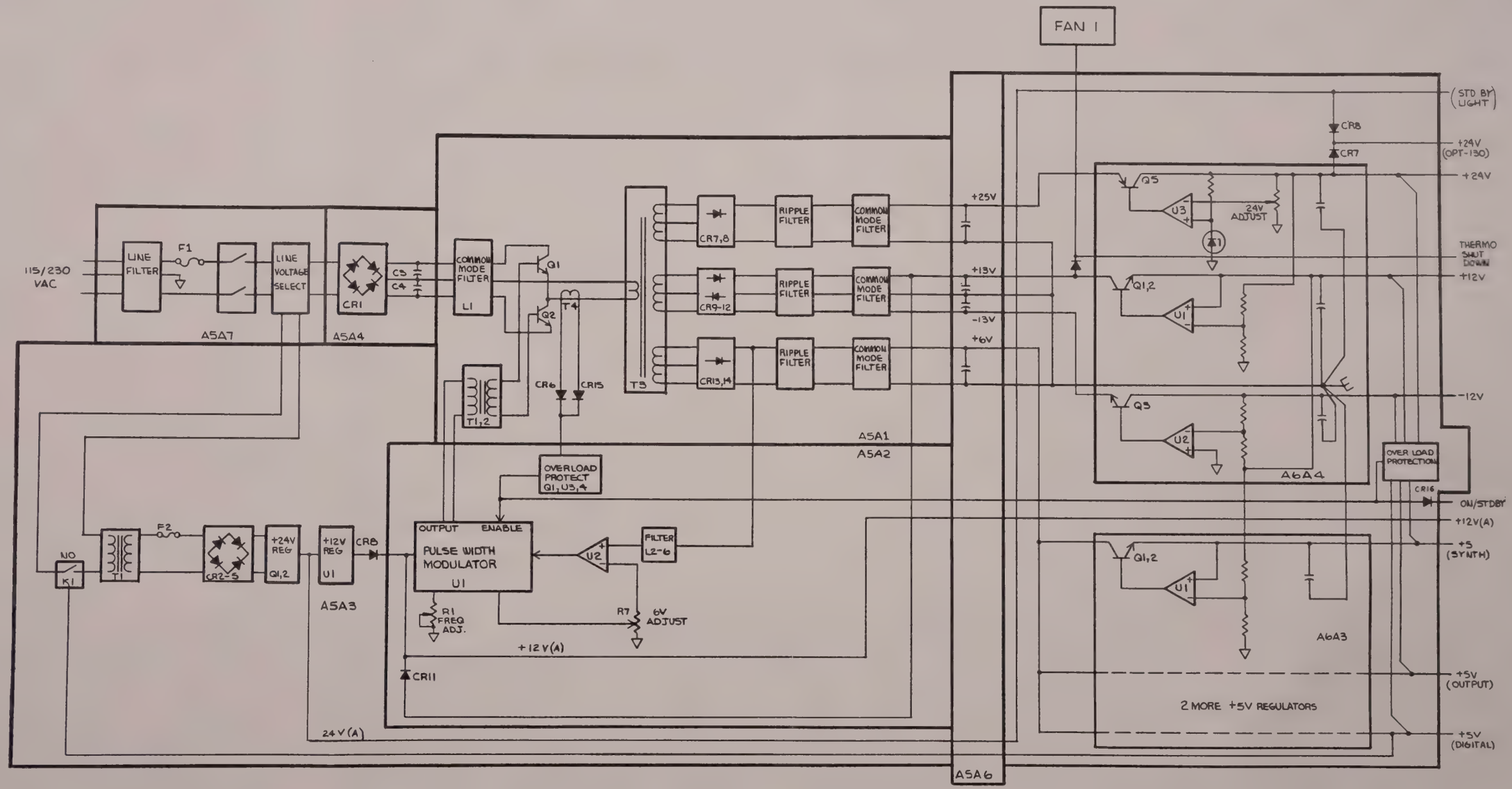

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Figure 3. System Block Diagram (cont)

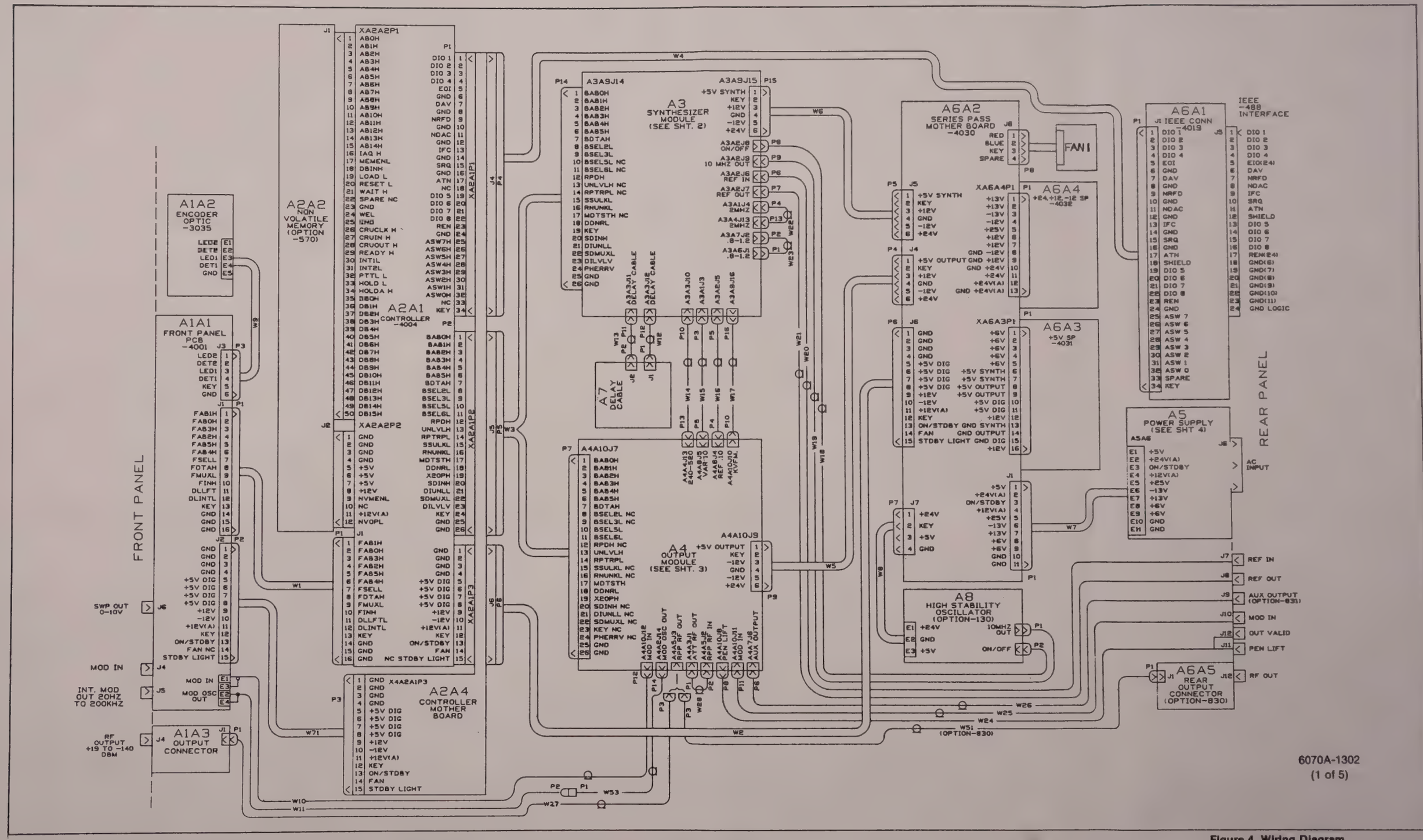

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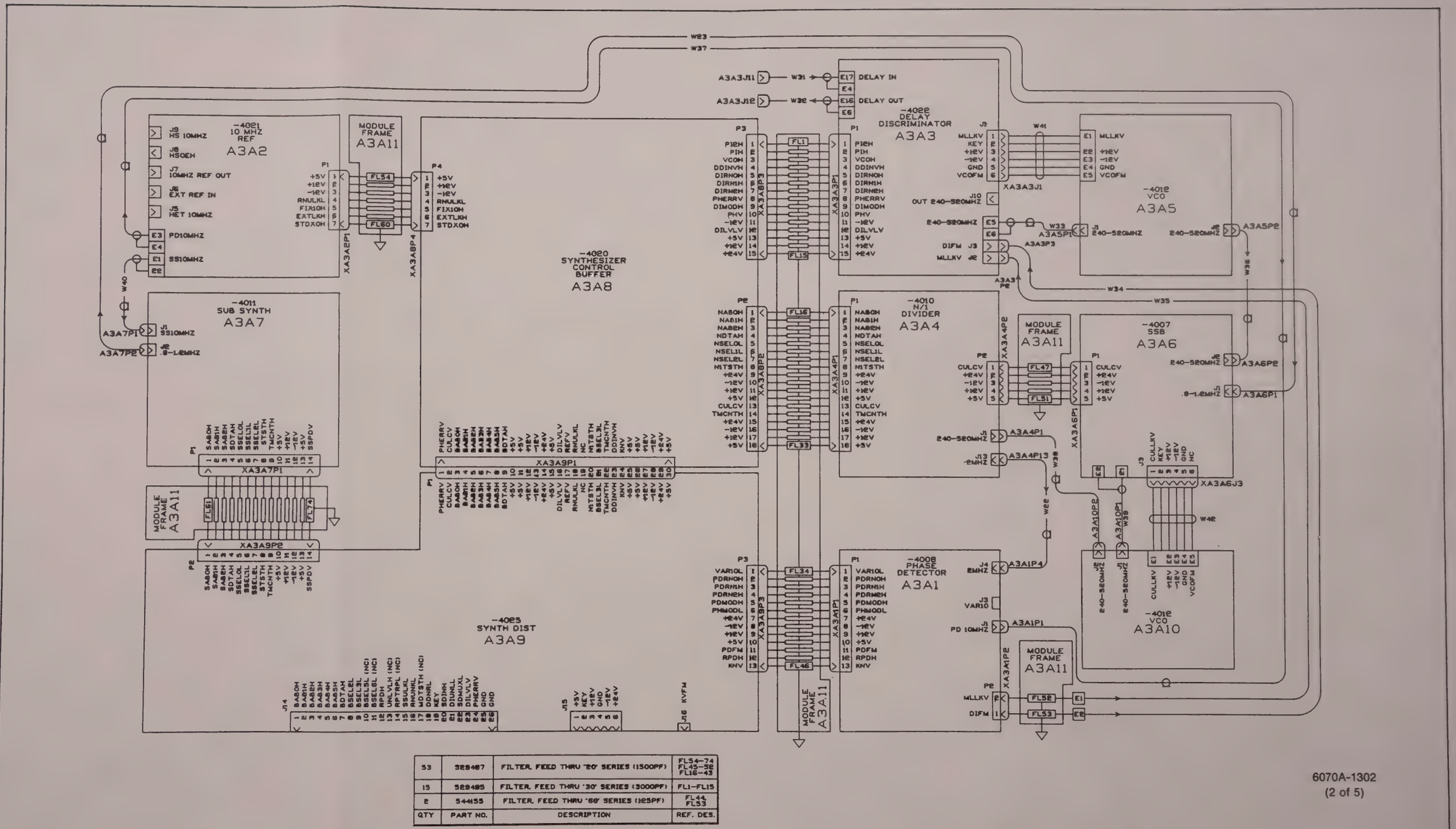
Figure 4. Wiring Diagram



53	529487	FILTER, FEED THRU '20' SERIES (1500PF)	FL54-74 FL45-52 FL16-43
15	529485	FILTER, FEED THRU '30' SERIES (3000PF)	FL1-FL15
2	544155	FILTER, FEED THRU '60' SERIES (125PF)	FL44, FL53
QTY	PART NO.	DESCRIPTION	REF. DES.

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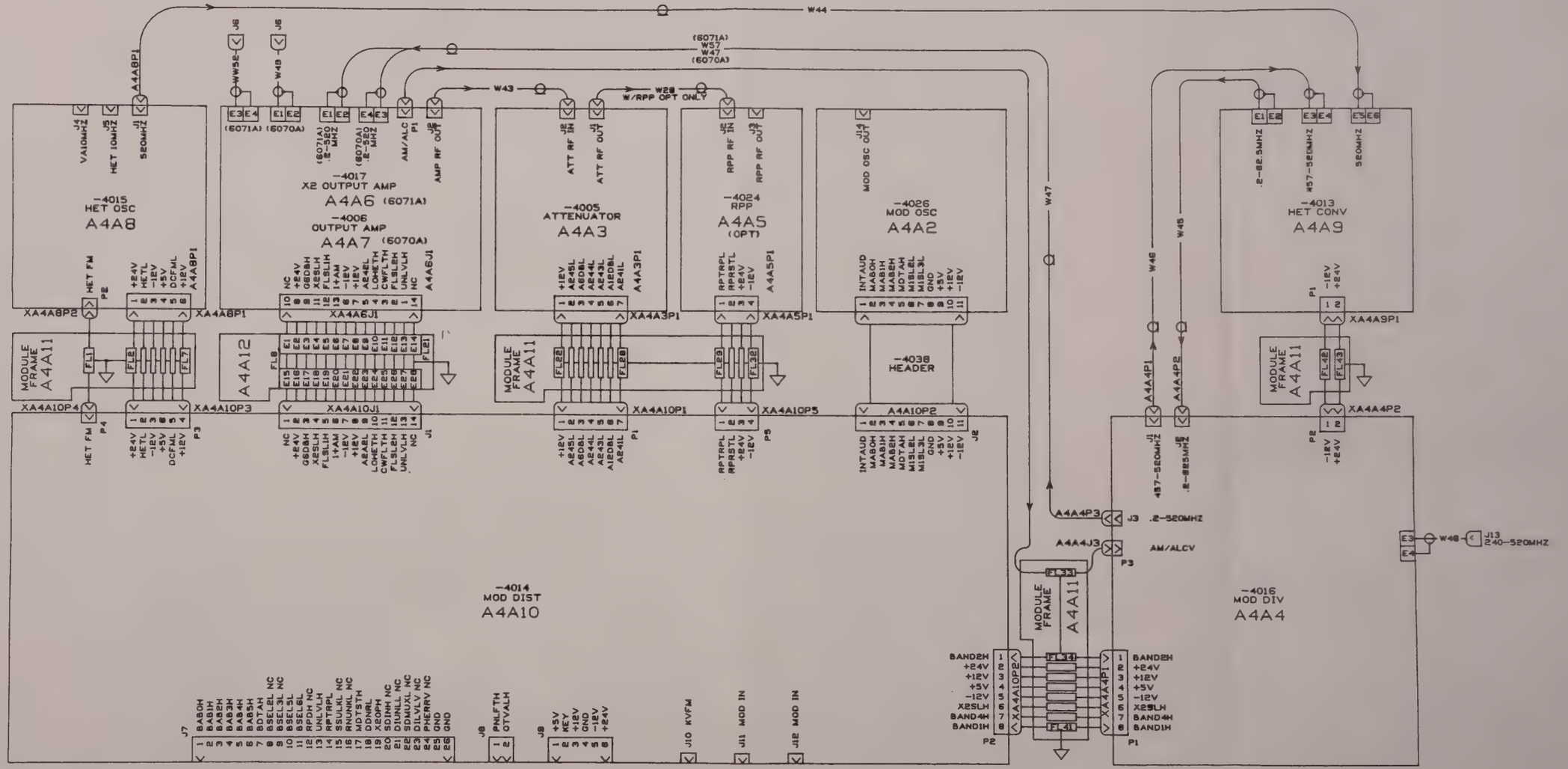
Figure 4. Wiring Diagram (cont)



23	529487	FILTER FEED THRU '20' SERIES (1500PF)	FL34-41 FL14-28 FL2-12
3	544155	FILTER FEED THRU '60' SERIES (125PF)	FL1,13,33
4	529495	FILTER FEED THRU '30' SERIES (3000PF)	FL29-32
QTY.	PART NO.	DESCRIPTION	REF DES

Figure 4. Wiring Diagram (cont)

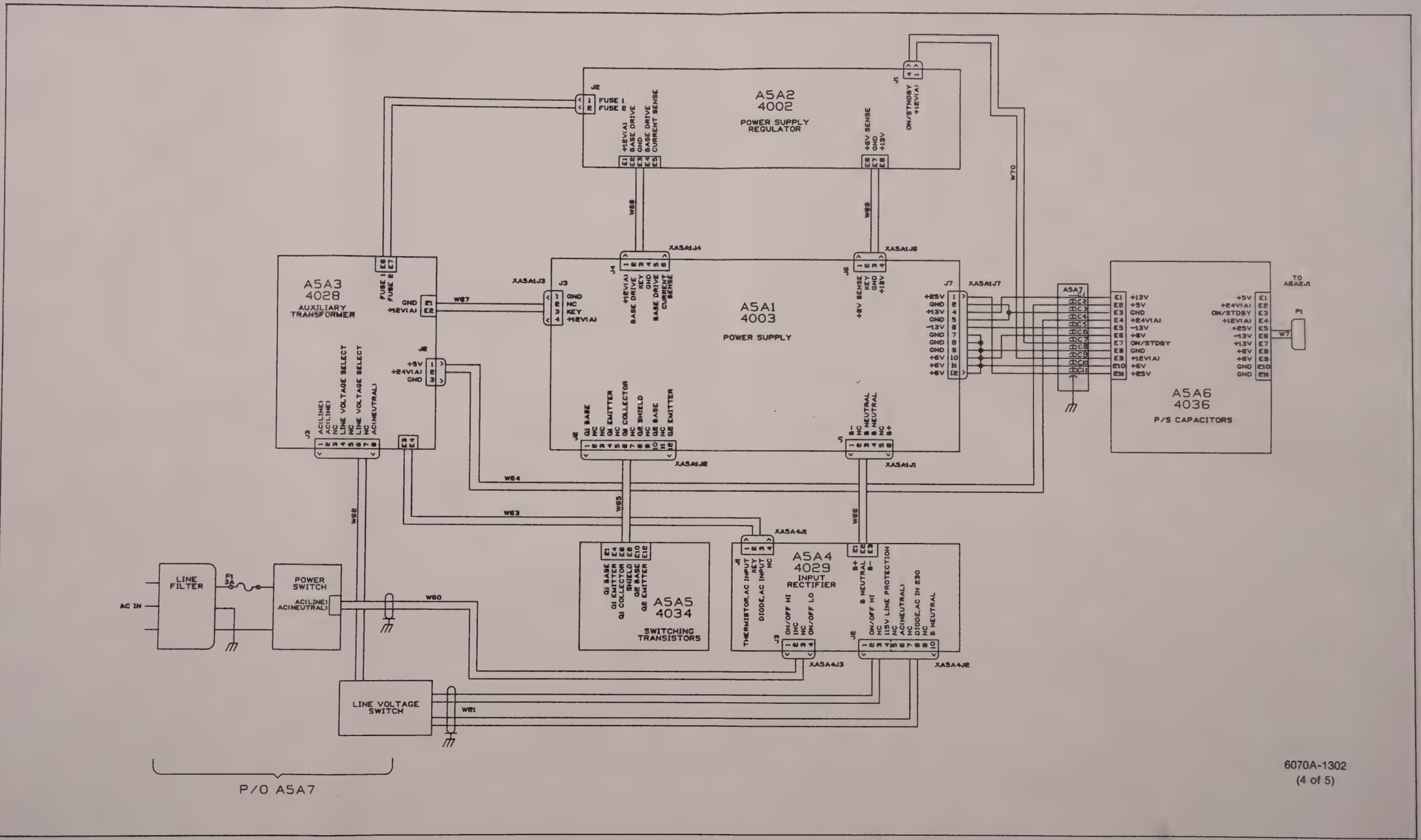


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Figure 4. Wiring Diagram (cont)

W#	JF P/N	DWG.NO.	TYPE	FROM	TO	NOTES
1	521773	6070A-4416	FLAT	A2A1J1	A1A1J1	FP/PWR CONTROLLER
2	527440	6070A-4421	PWR	A6A2J6	A2A4J6	P/O W72 PWR
3	521781	6070A-4418	FLAT	A2A4J5	A4A10J7&A3A9J14	CPU SERIAL BUS
4	521779	6070A-4417	FLAT	A2A4J4	A6A1J1	IEEE
5	521773	6070A-4421	PWR	A6A2J4	A4A10J9	P/O W72 PWR
6	521773	6070A-4421	PWR	A6A2J5	A3A9J15	P/O W72 PWR
7	515262	6070A-4408-1	PWR	A5A6E1-E11	A6A2J1	SERIES PASS INPUT
8	577304	6070A-4407-7	PWR	A6A2J7	A8E1-3	OPT-130
9	521732	6070A-4412-2	FLAT	A1A2E1-5	A1A1J3	ENCODER CONTROLLER
10	527580	RFC4400-31-14	RG188	A1A1E1	A4A10J12	MOD IN
11	577916	RFC4400-31-15	RG188	W53P1	A1A1E2	MOD OUT
12	523522	6070A-8026	SR	A3A3J12	A7J1	DELAY OUTSIDE
13	523456	6070A-8027	SR	A7J2	A3A3J11	DELAY INSIDE
14	508499	6070A-8024	SR	A3A3J10	A4A4J13	240-520
15	508580	6070A-8018	SR	A4A8J5	A3A1J3	VAR-10
16	508572	6070A-8017	SR	A3A2J5	A4A8J4	REF 10
17	205823	RFC4400-1-10	RG188	A4A10J10	A3A9J16	KVFM AUDIO
18	508580	6070A-8016	RG188	A3A2J8	A8J2	OPT-130
19	508549	6070A-8019	SR	A8J1	A3A2J9	OPT-130
20	508531	6070A-8020	SR	RP/A6J7	A3A2J8	REF-IN
21	508523	6070A-8021	SR	A3A2J7	RP/A6J8	REF OUT
22	508515	6070A-8023	SR	A3A4J13	A3A1J4	2 MHZ
23	205773	RFC4400-1-5	RG188	A3A7J2	A3A6J1	.8-1.2 MHZ
24	576090	6070A-4441	FLAT	A4A10J8	RP/A6J11,J12	PNLFTHLOTVALH
25	259754	RFC-4400-2-21	RG188	RP/A6J10	A4A10J11	MOD IN
26	508507	6070A-8022	SR	A4A7J6	RP/A6J9	OPT-831
27	523506	6070A-8025	SR	A4A5J3	A1A3J1	RF OUT-TO FR. PANEL
28	508556	6070A-8015	SR	A4A3J11	A4A5J2	OPT-870
29	NOT USED					
30	NOT USED					
31	524710	6070A-8047	SR	A3A3E17,E4	A3A3J11	DELAY IN
32	524728	6070A-8046	SR	A3A3J12	A3A3E6,E16	DELAY OUT
33	538249	6070A-4435	RG188	A3A5J1	A3A3E5,E6	240-520 MHZ
34	537761	6070A-4436	1 COND	A3A11E2	A3A3J3	DIFM
35	537761	6070A-4436	1 COND	A3A11E1	A3A3J2	MLLKV
36	537787	RFC4400-44-34	RG188	A3A5J2	A3A6J2	240-520 MHZ
37	526723	FFC4400-31-3	RG188	A3A2E3	A3A1J1	PD10 MHZ
38	205757	RFC4400-1-3	RG188	A3A10J2	A3A4J1	240-520 MHZ
39	537779	6070A-4433	RG188	A3A10J1	A3A6E1,E2	240-520 MHZ
40	526723	RFC4400-31-3	RG188	A3A2E1	A3A7J1	SS 10 MHZ

W#	JF P/N	DWG.NO.	TYPE	FROM	TO	NOTES
41	508986	6070A-4412-4	5 COND	A3A3J1	A3A5E1-E5	VCO PWR
42	508986	6070A-4412-4	5 COND	A3A6J3	A3A10E1-E5	VCO PWR
43	524702	6070A-8046	SR	A4A8(7)J2	A4A3J2	AMP RF OUT
44	526715	RFC4400-31-2	RG188	A4A8J1	A4A9E5,E6	520 MHZ
45	526723	RFC4400-31-3	RG188	A4A9E1,E2	A4A4J2	.2-62.5 MHZ
46	526707	RFC4400-31-1	RG188	A4A4J1	A4A9E3,E4	457-520 MHZ
47	577288	RFC4440-2	RG188	A4A4J3	A4A7E3	.2-520 MHZ (6070A)
48	524975	6070A-8052	SR	A4J13	A4A4E1,2	240-520 MHZ
49	524963	6070A-8053	SR	A4A7E1,E2	A4J6	AUX-OUT (6070A)
50	NOT USED					
51	535633	6070A-8071	SR	A4A5J3	A6A5J1	OPT-830
52	535609	6070A-8053	SR	A4A6E3,E4	A4J6	AUX-OUT (6071A)
53	546705	RFC4400-34-14	RG188	A4A2J14	W11P2	MOD OSC OUT
54	417535	P/O-2704	DIP	A4A10J1	A4A12E15-E8	WALL INSERT
55	520320	P/O-2704	DIP	A4A12E1-14	A4A7J1	WALL INSERT
56	NOT USED					
57	545606	6070A-4440-1	RG188	A4A4J3	A4A6E1,E2	.2-520 MHZ (6071A)
58	NOT USED					
59	NOT USED					
60	544973	6070A-4437	2 COND	A5A4J3	PWR SW	AC LINE
61	544981	6070A-4439	5 COND	A5A4J2	LINE VOLT SW	
62	521377	6070A-4413-1	5 COND	A5A3J1	LINE VOLT SW	
63	544999	6070A-4438	2 COND	A5A3E3-E5	A5A4J1	
64	583484	6070A-4415-2	2 COND	A5A3J2	A5A7	HEAT SINK
65	515239	6070A-4408-2	6 COND	A5A5E6-E12	A5A1J2	
66	515213	6070A-4410-1	3 COND	A5A4E1-E3	A5A1J1	
67	514810	6070A-4407-2	2 COND	A5A3E1,E2	A5A1J3	
68	521344	6070A-4412-1	6 COND	A5A2E1-E5	A5A1J4	
69	514794	6070A-4407-1	3 COND	A5A1J6	A5A2E6-E8	
70	521369	6070A-4415-1	2 COND	A5A2J1	A5A7	HEAT SINK
71	521765	6070A-4419-1	FLAT	XA2A1P3	A1A1J2	FR. PANEL PWR
72	527440	6070A-4421				P/S BUNDLE (W2,W5,W6)
73	582908	6070A-4442	2 COND	A5A3E6,E7	A5A2J2	

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Figure 4. Wiring Diagram (cont)

Figure 5. A1A1, A1A2 Front Panel PCB Assembly

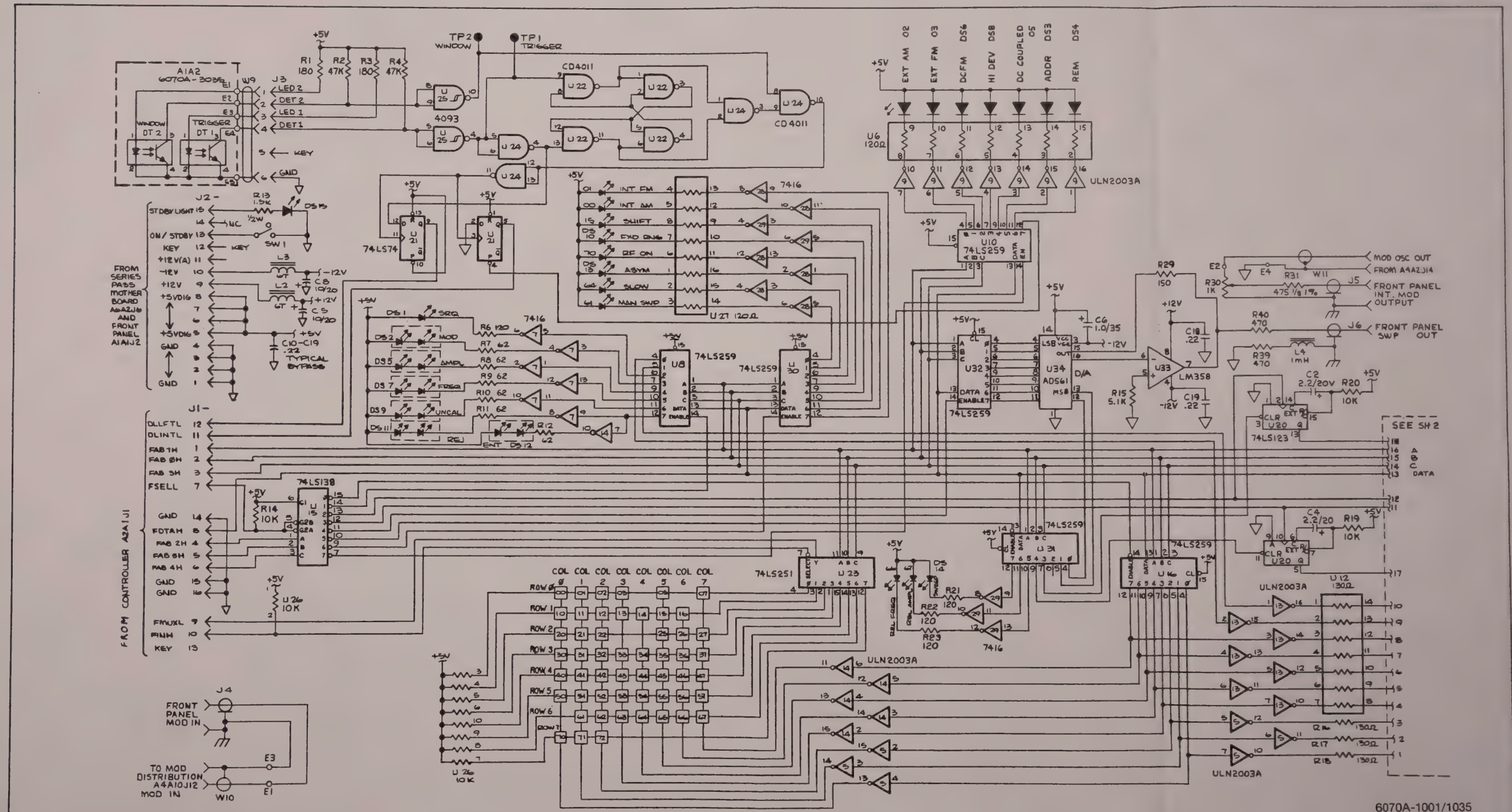

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Figure 5. A1A1, A1A2 Front Panel Assembly (cont)

NOTES - UNLESS OTHERWISE SPECIFIED:

1. ALL RESISTANCES ARE IN OHMS 1/4W 5%, ALL CAPACITANCES ARE IN MICROFARADS.

REF DES	IC TYPE	PWR PIN#	GND PIN#
U22,24	CD4011	14	7
U21	74LS74	14	7
U25	4093	14	7
U15	74LS138	16	8
U2,8, 10,16 thru 20,32	74LS259	16	8
U23	74LS251	16	8
U7 28,29	7416	14	7
U4,6, 9,12,14, 18	ULN2003A	9	8
U20	74LS123	16	8
U34	AD561	14	1
U1,33	LM358	8(+12)	4(GND)

REFERENCE DESIGNATIONS	
LAST USED	NOT USED
U 34 Q 12 R 40 C 19 L 4 DS 57	R 5 16-23, 33-39

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Figure 5. A1A1, A1A2 Front Panel Assembly (cont)

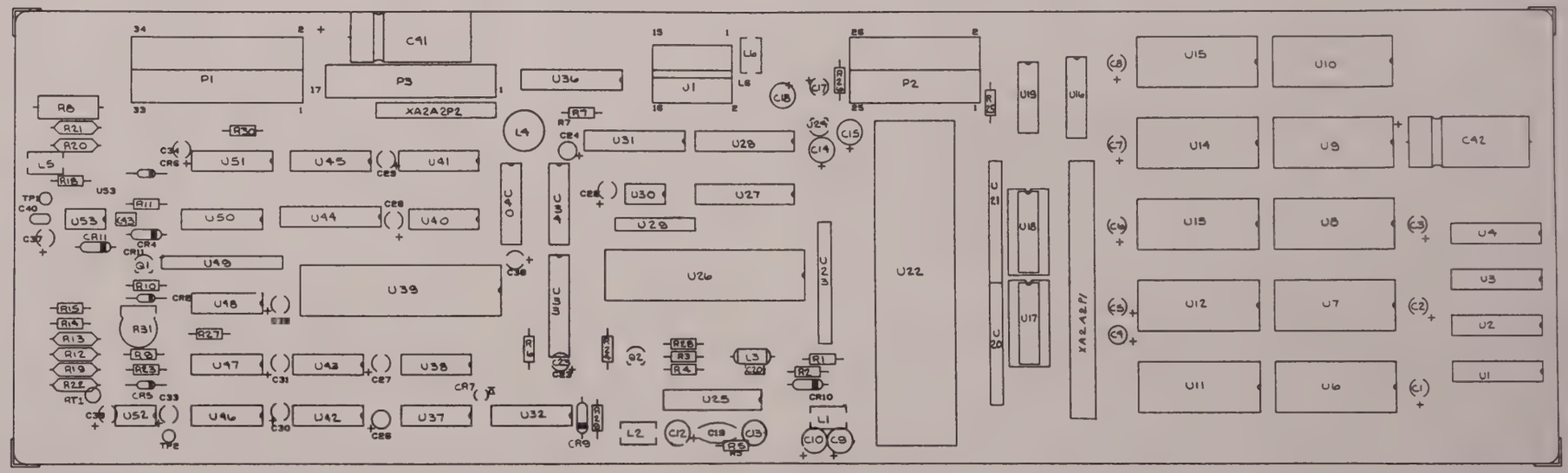

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Figure 6. A2A1, A2A4 Controller Assembly (cont)

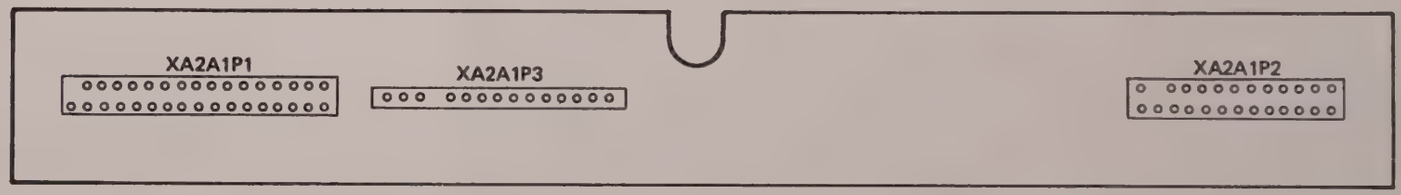

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Figure 6. A2A1, A2A4 Controller Assembly (cont)

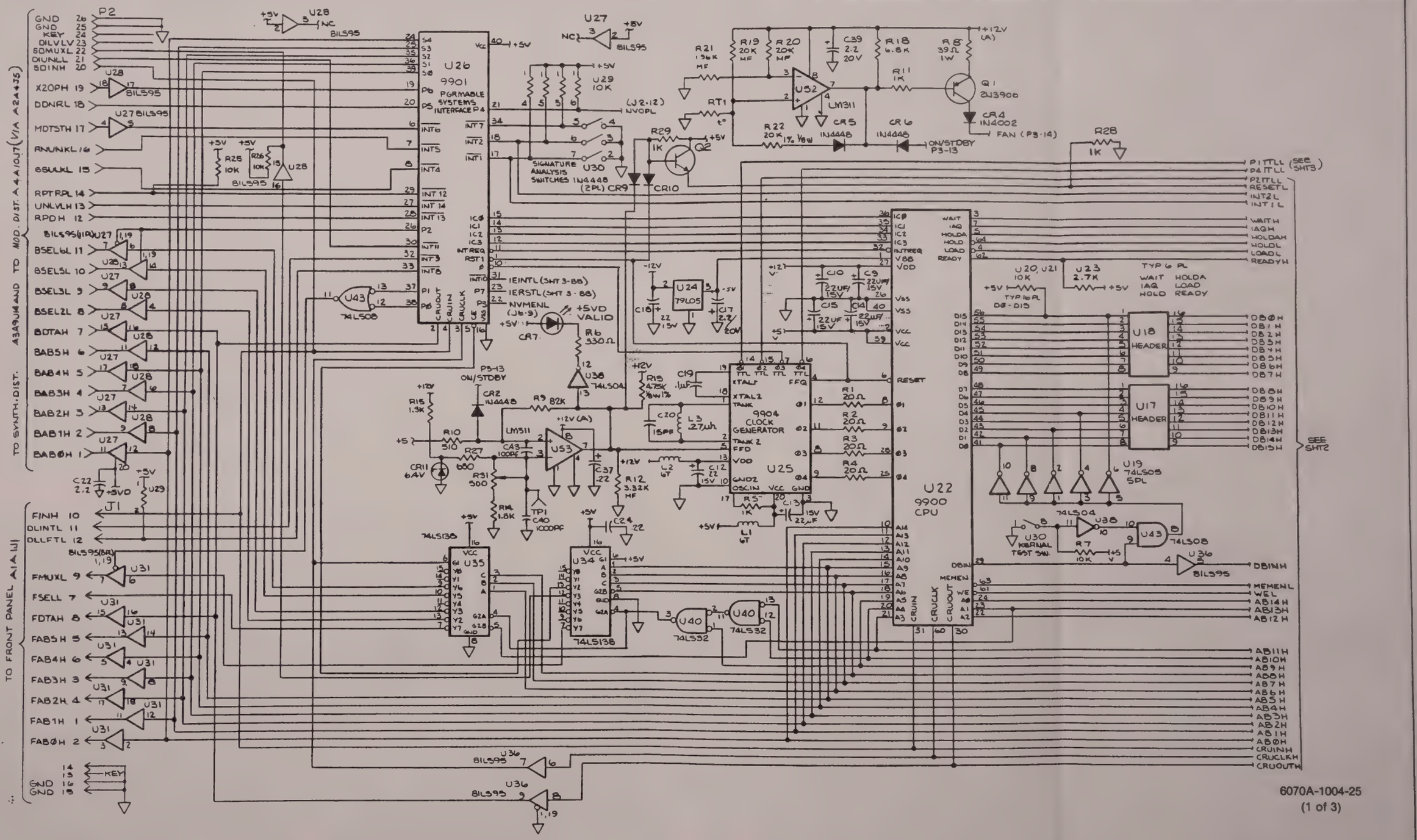

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Figure 6. A2A1, A2A4 Controller Assembly (cont)

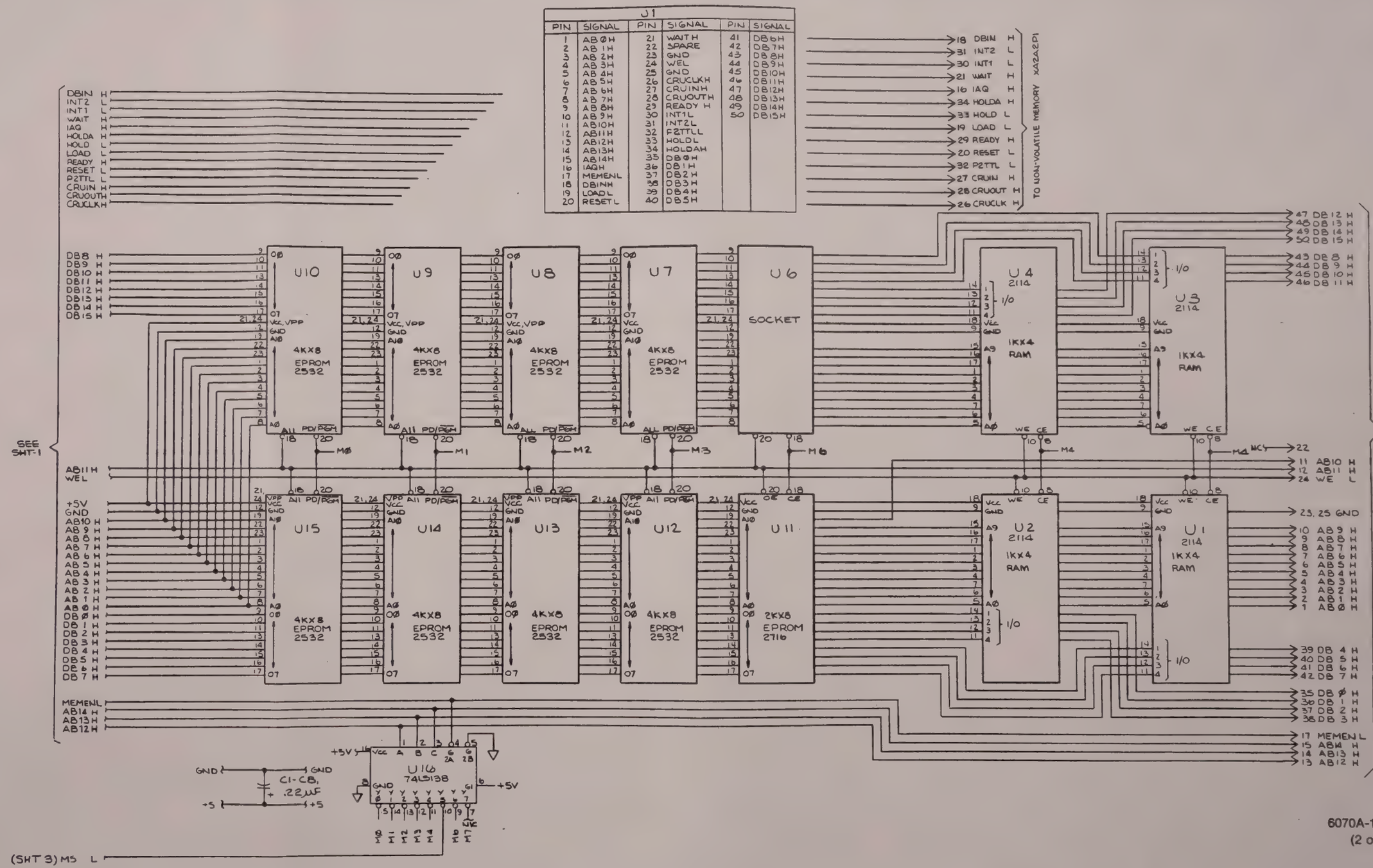

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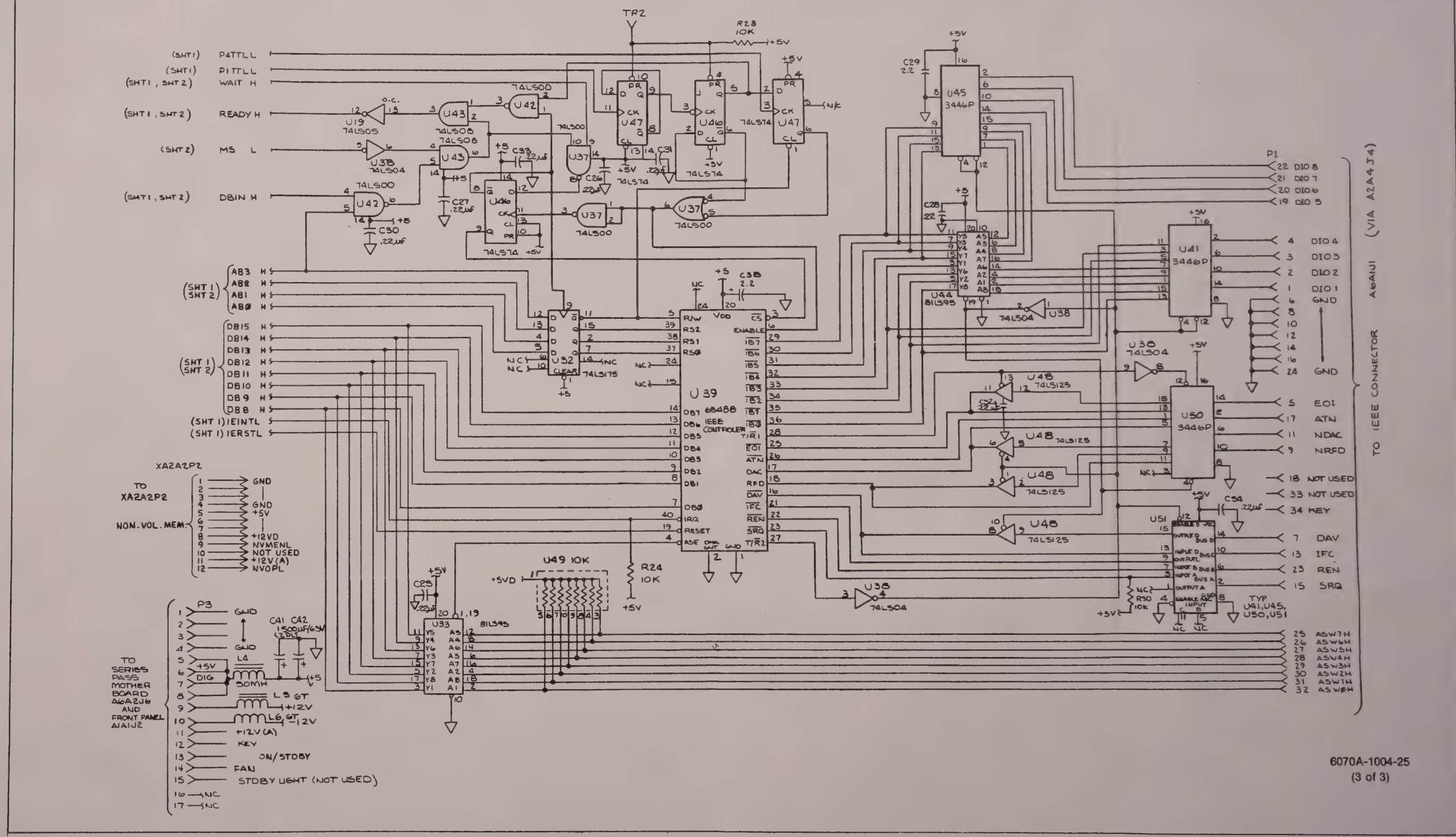
Figure 6. A2A1, A2A4 Controller Assembly (cont)



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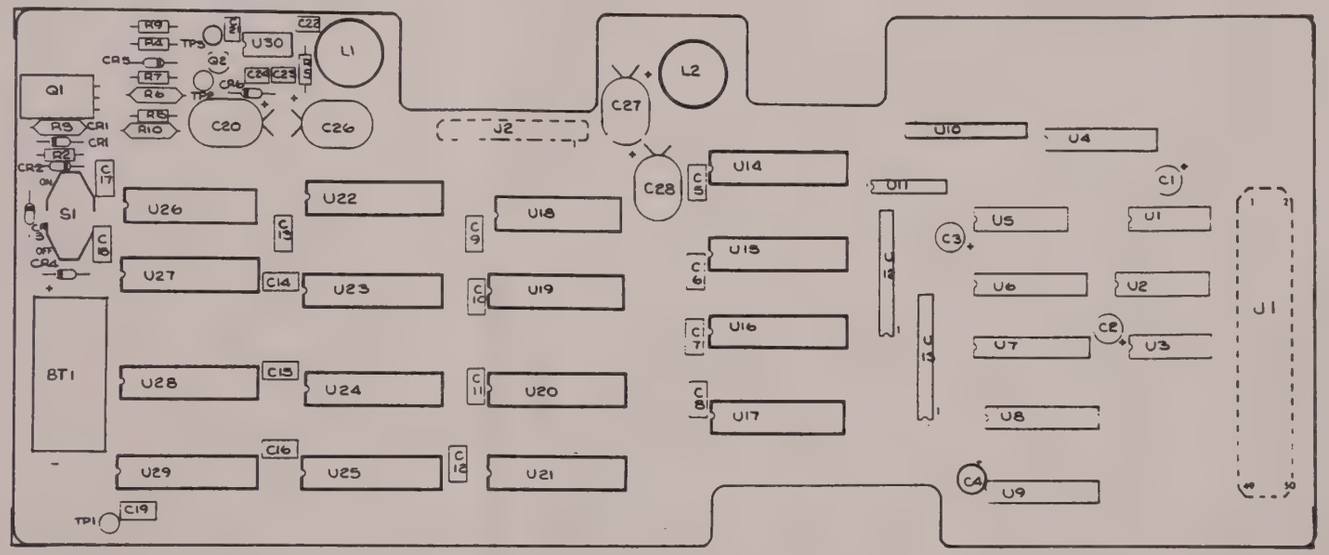
(3 of 3)

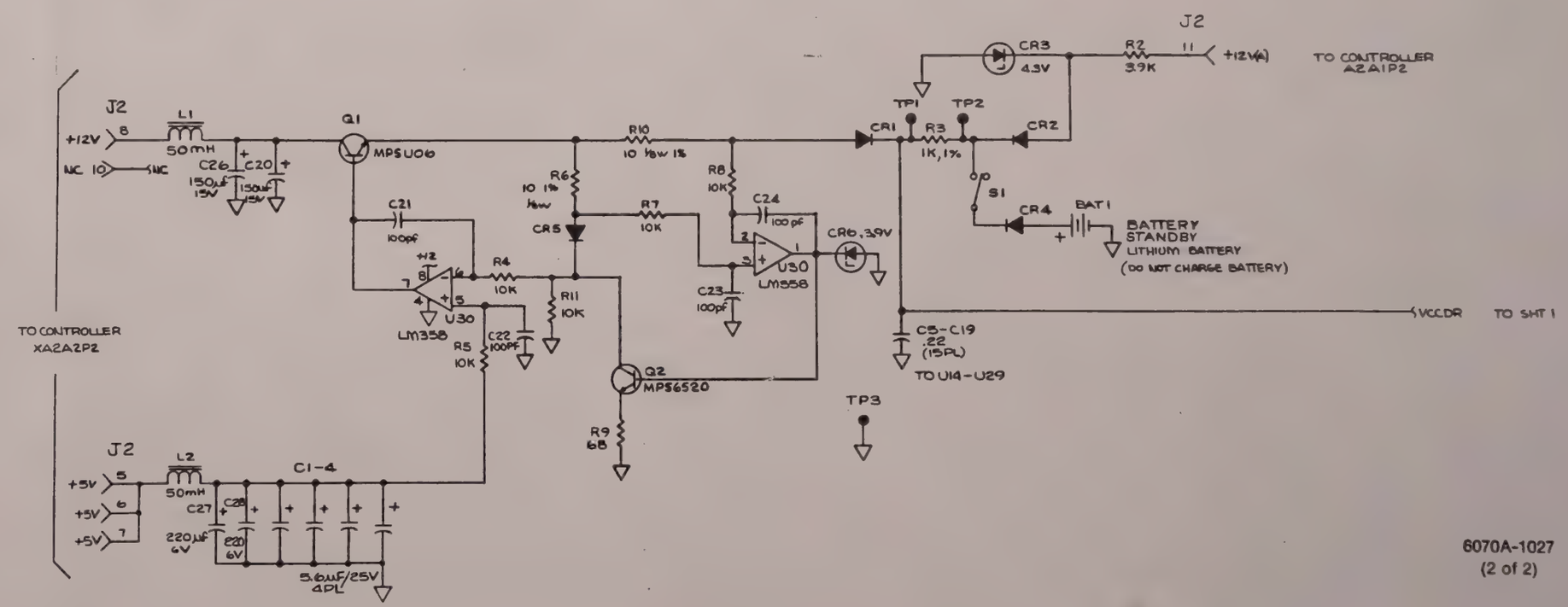
Figure 6. A2A1, A2A4 Controller Assembly (cont)

NOTE: IF BATTERY POWER IS LOST & REAPPLIED, UNIT WILL FIND GARBAGE IN THE MEMORY UPON POWER UP. TO CORRECT, ENTER DATA INTO ALL 50 MEMORY LOCATIONS, THEN TRY POWERING UP AGAIN. PROBLEM SHOULD CORRECT ITSELF.

PER FLUKE FACTORY
J.S. 2/12/88

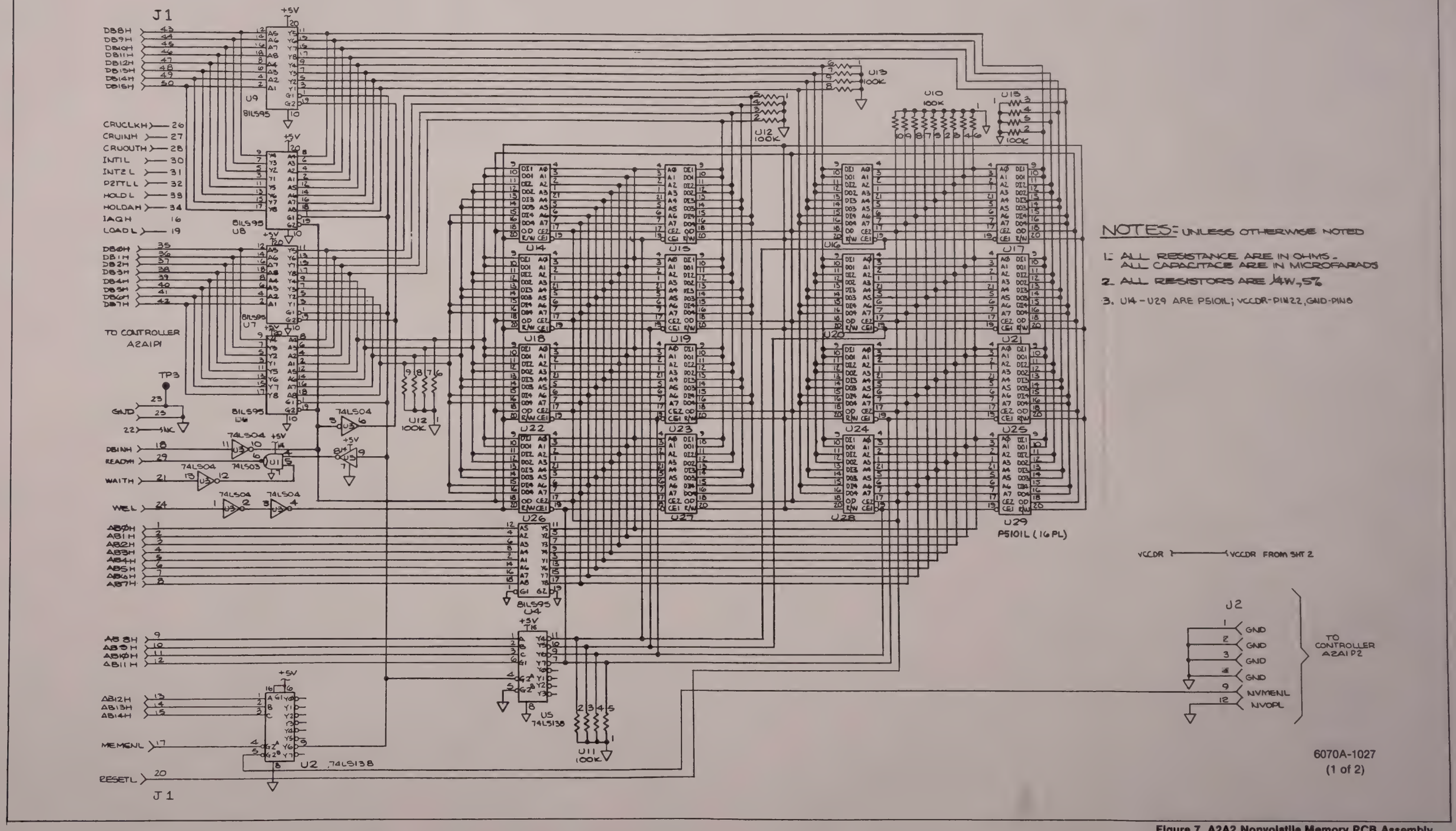


6070A-1627



6070A-1027
(2 of 2)

Figure 7. A2A2 Nonvolatile Memory PCB Assembly



NOTES: UNLESS OTHERWISE NOTED

1. ALL RESISTANCE ARE IN OHMS. ALL CAPACITACE ARE IN MICROFARADS
2. ALL RESISTORS ARE ¼W, 5%
3. U14 - U29 ARE PSIOIL; VCCDR-PIN22, GND-PIN8

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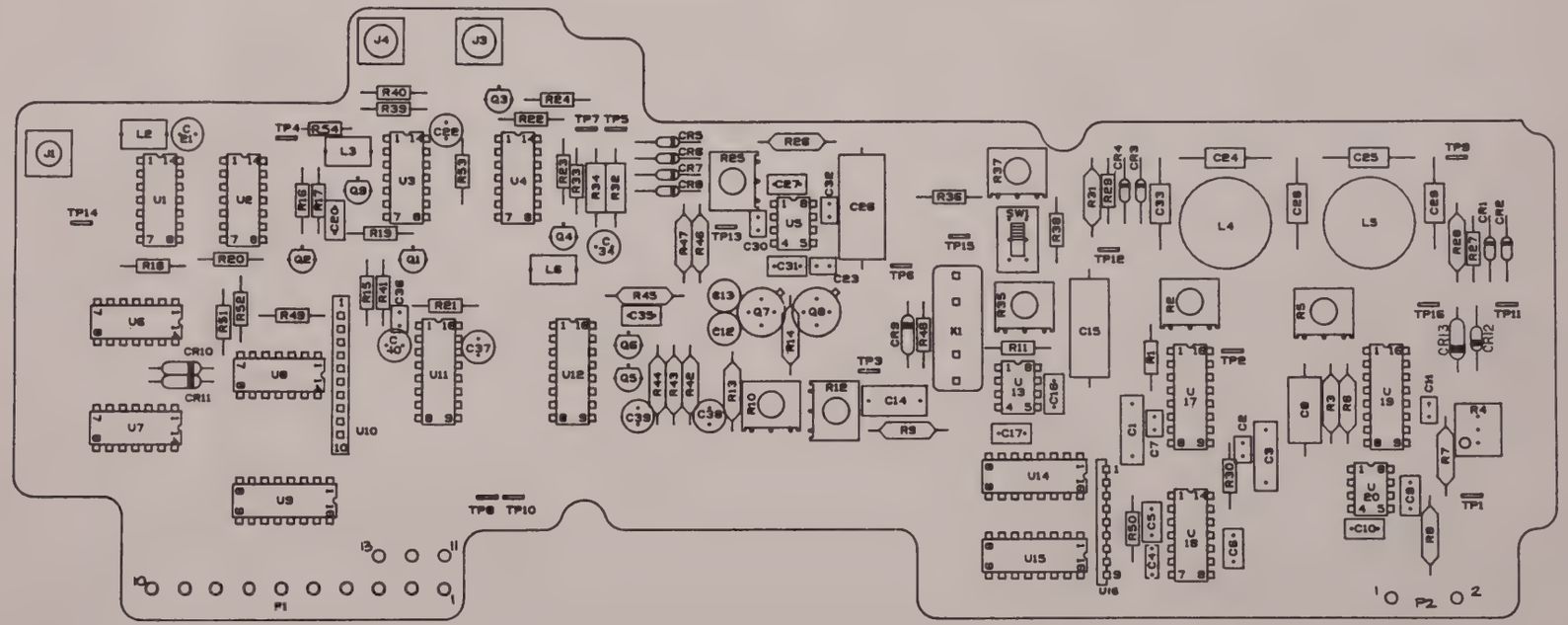
(1 of 2)

Figure 7. A2A2 Nonvolatile Memory PCB Assembly (cont)



6070A-1608

Figure 8. A3A1 Phase Detector PCB Assembly

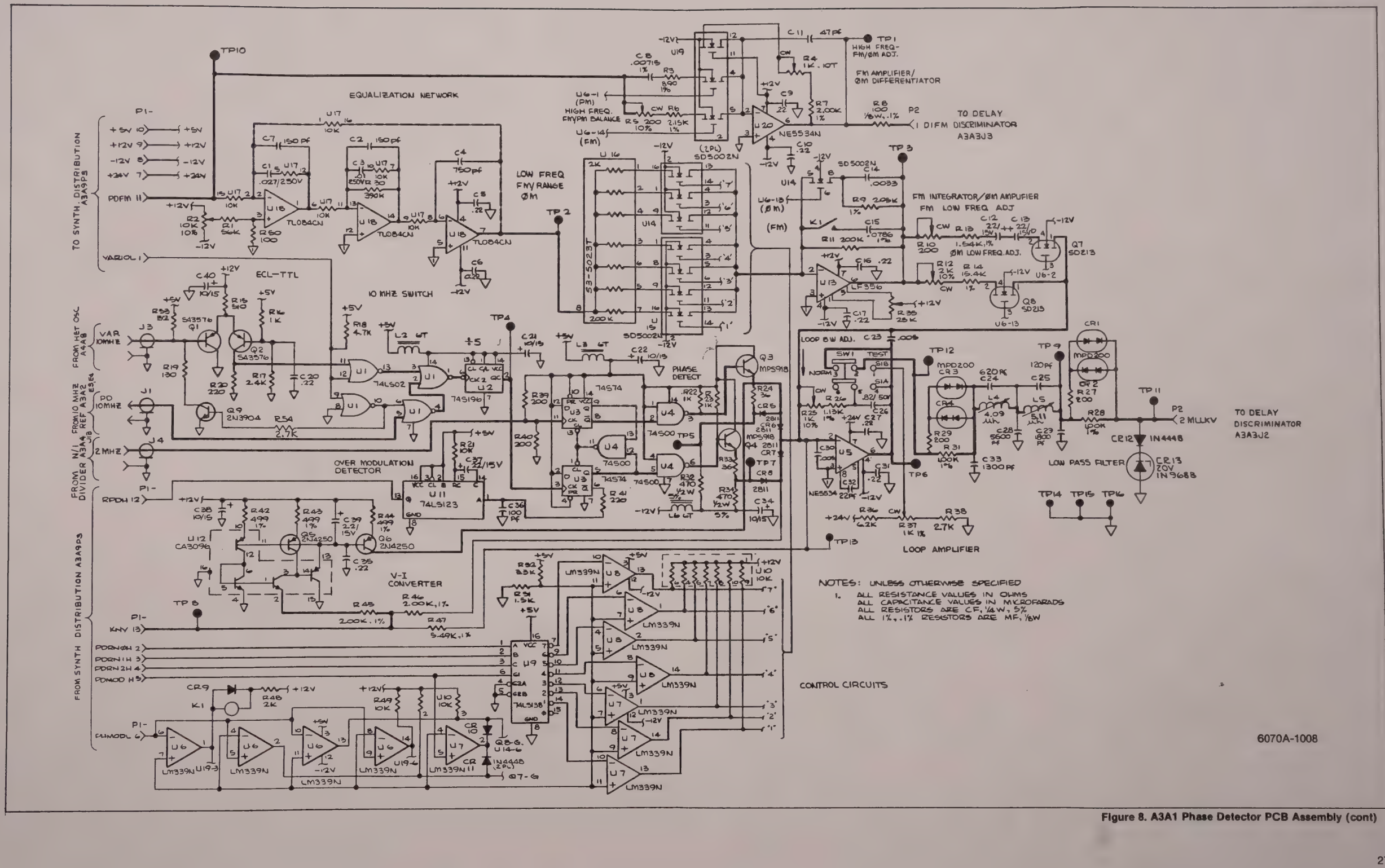
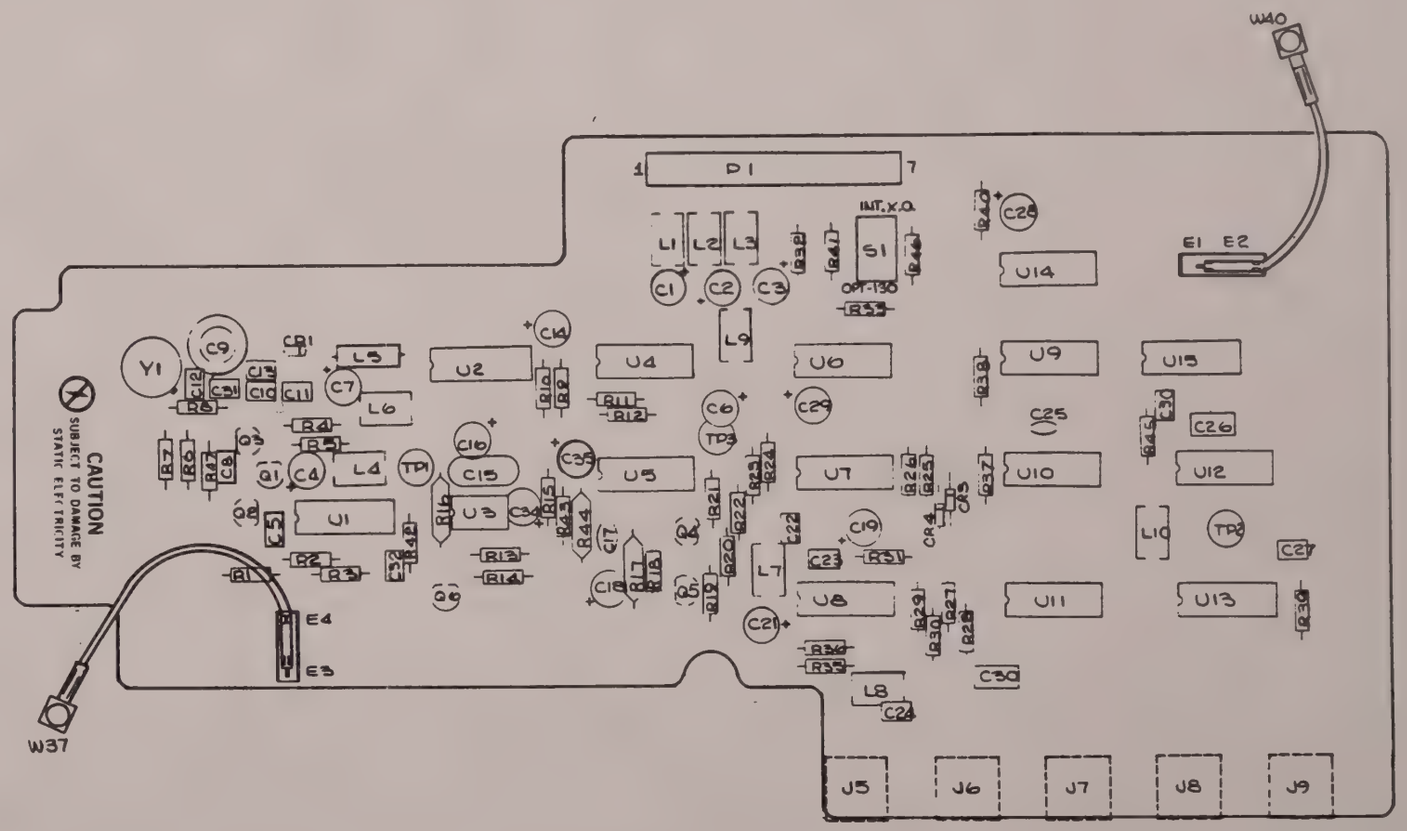


Figure 8. A3A1 Phase Detector PCB Assembly (cont)



6070A-1621

Figure 9. A3A2 10 MHz Reference PCB Assembly

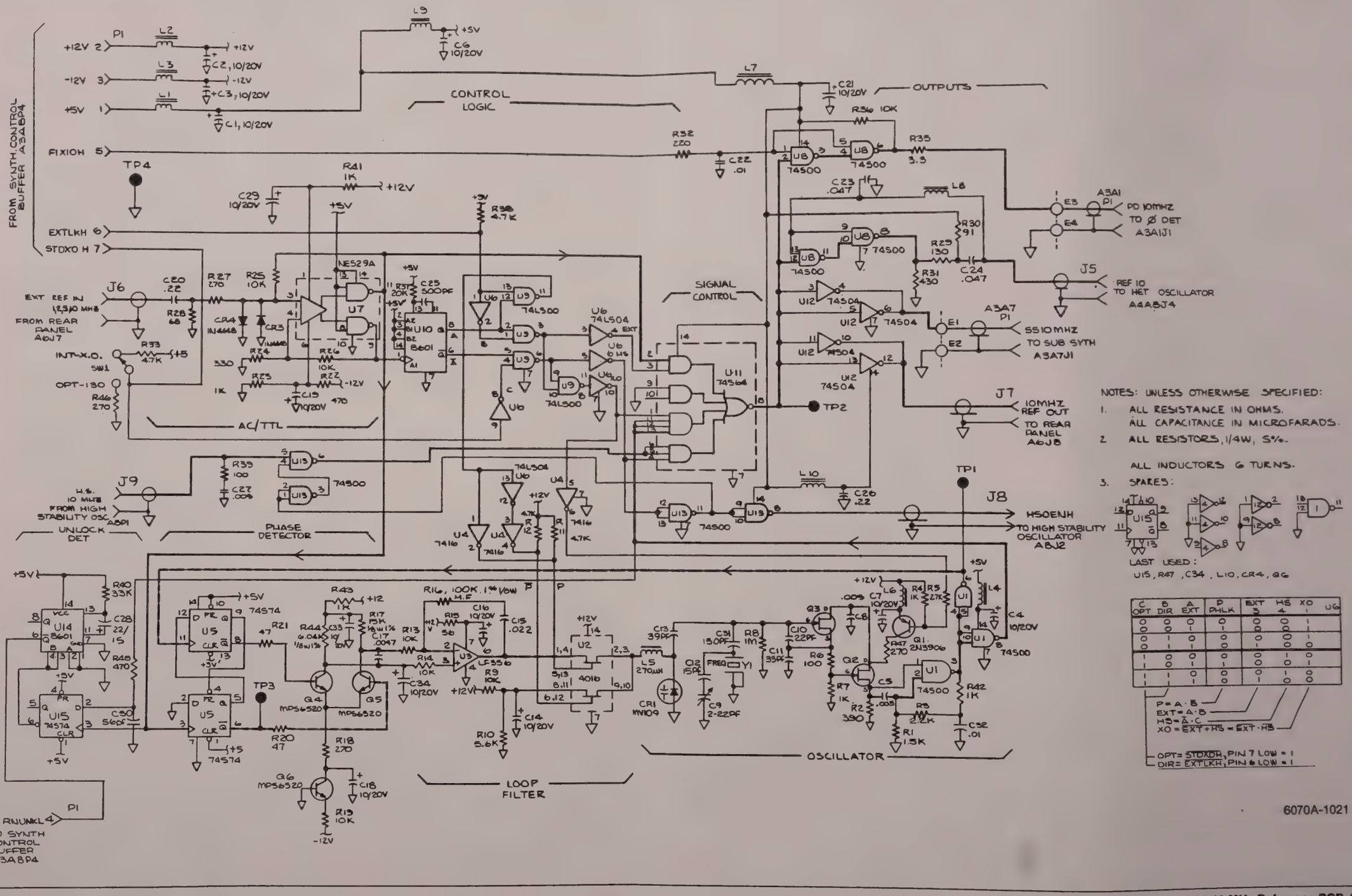
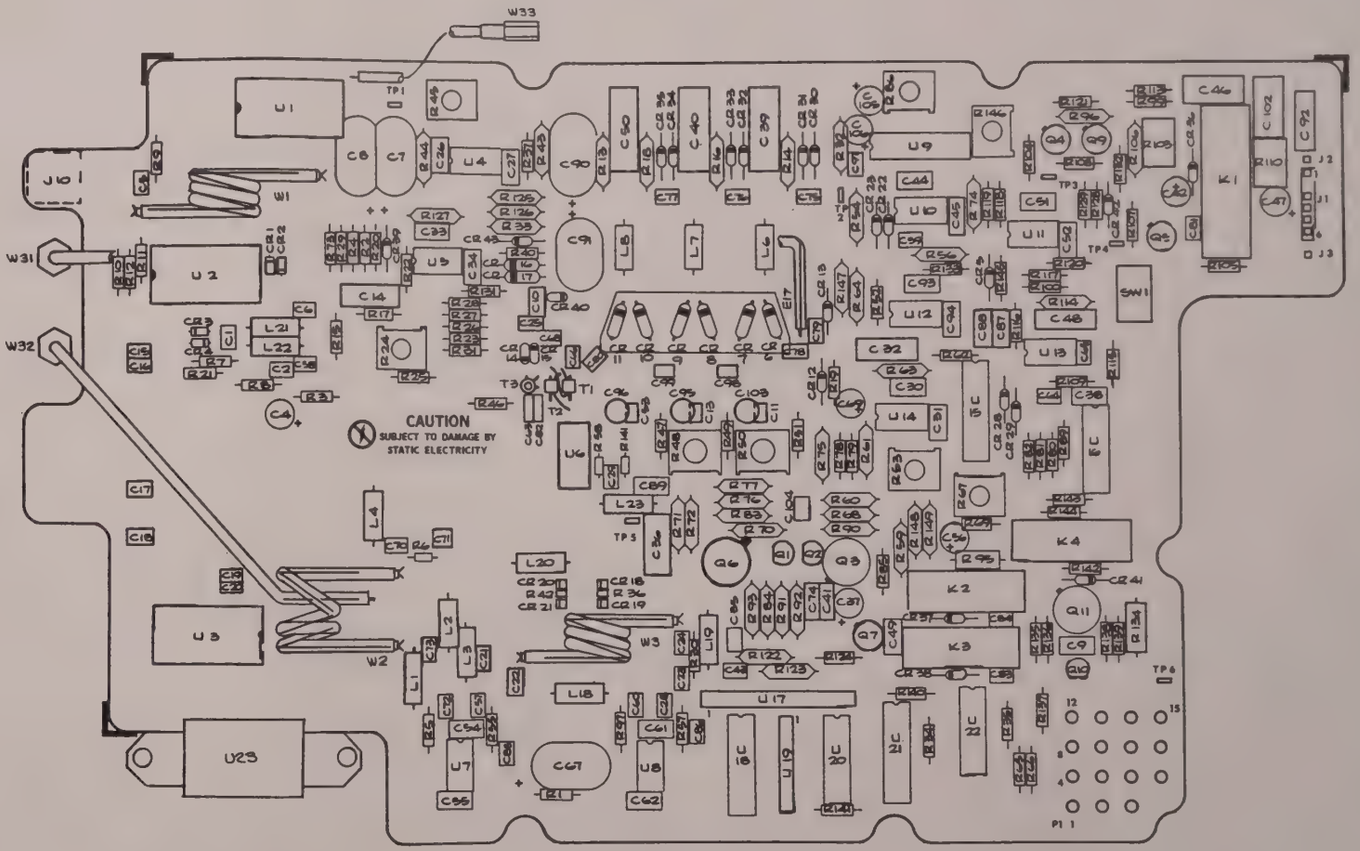


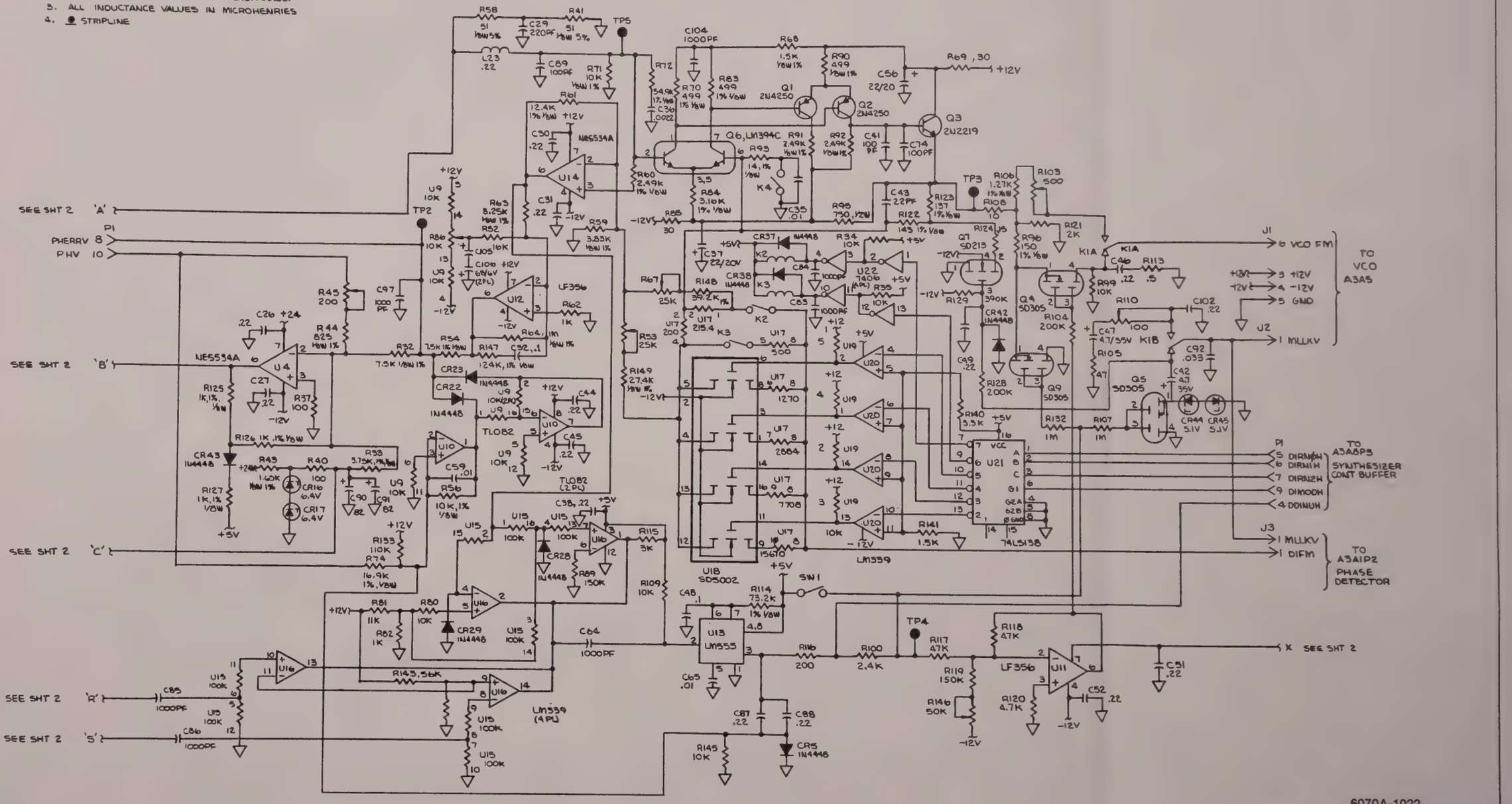
Figure 9. A3A2 10 MHz Reference PCB Assembly (cont)



6070A-1622

Figure 10. A3A3 Delay Discriminator PCB Assembly

NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTANCE VALUES IN OHMS 1/4, 5%
2. ALL CAPACITANCE VALUES IN MICROFARADS.
3. ALL INDUCTANCE VALUES IN MICROHENRIES
4. ⏚ STRIPLINE



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(1 of 2)

Figure 10. A3A3 Delay Discriminator PCB Assembly (cont)

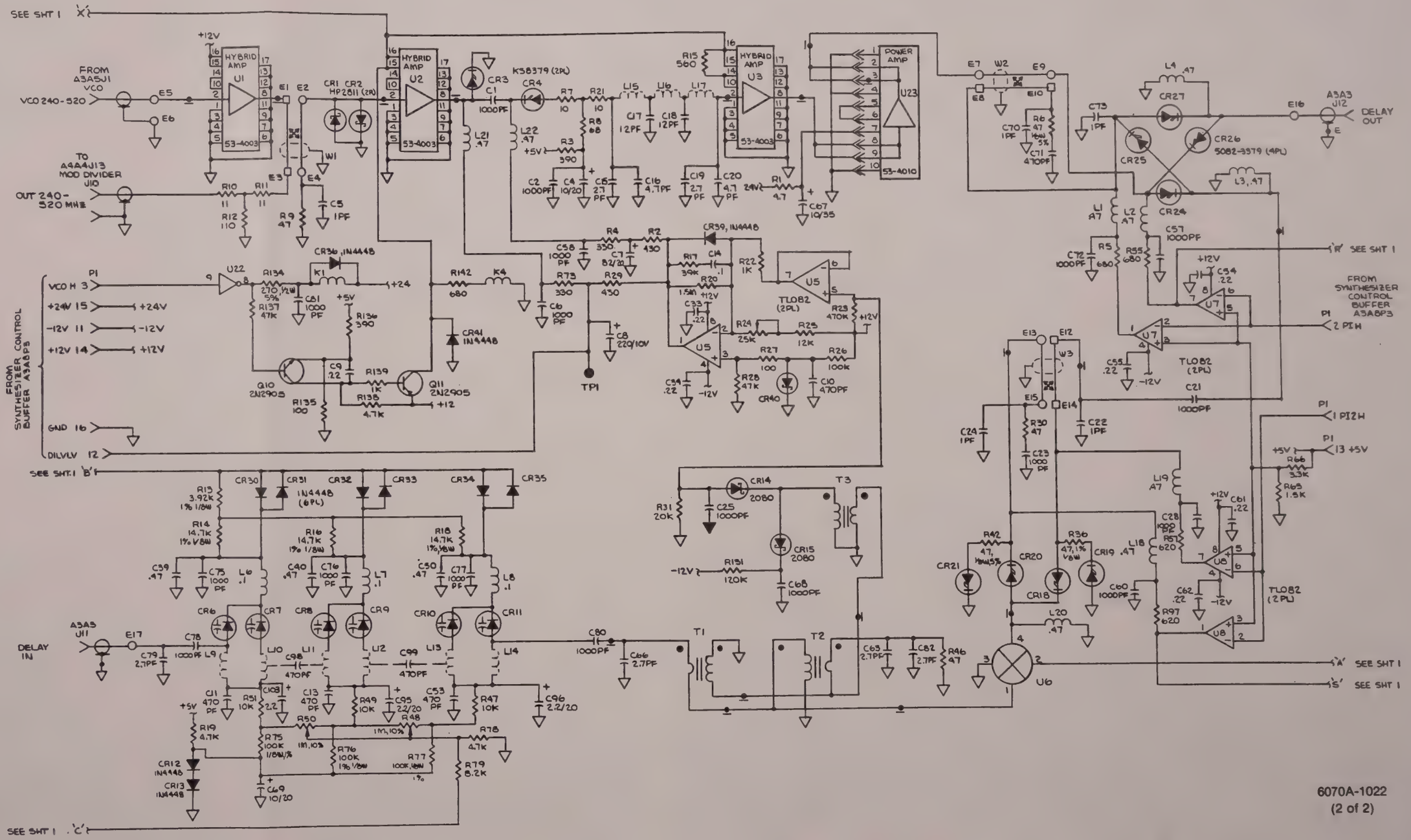

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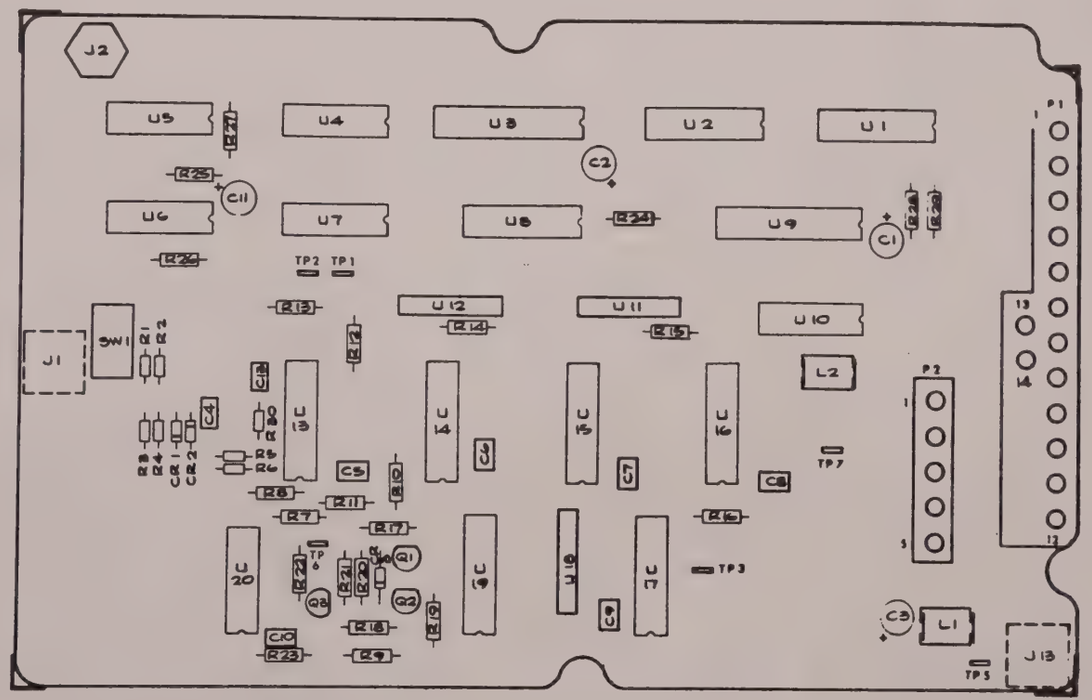
Figure 10. A3A3 Delay Discriminator PCB Assembly (cont)



6070A-1610-12

Figure 11. A3A4 N/1 Divider PCB Assembly

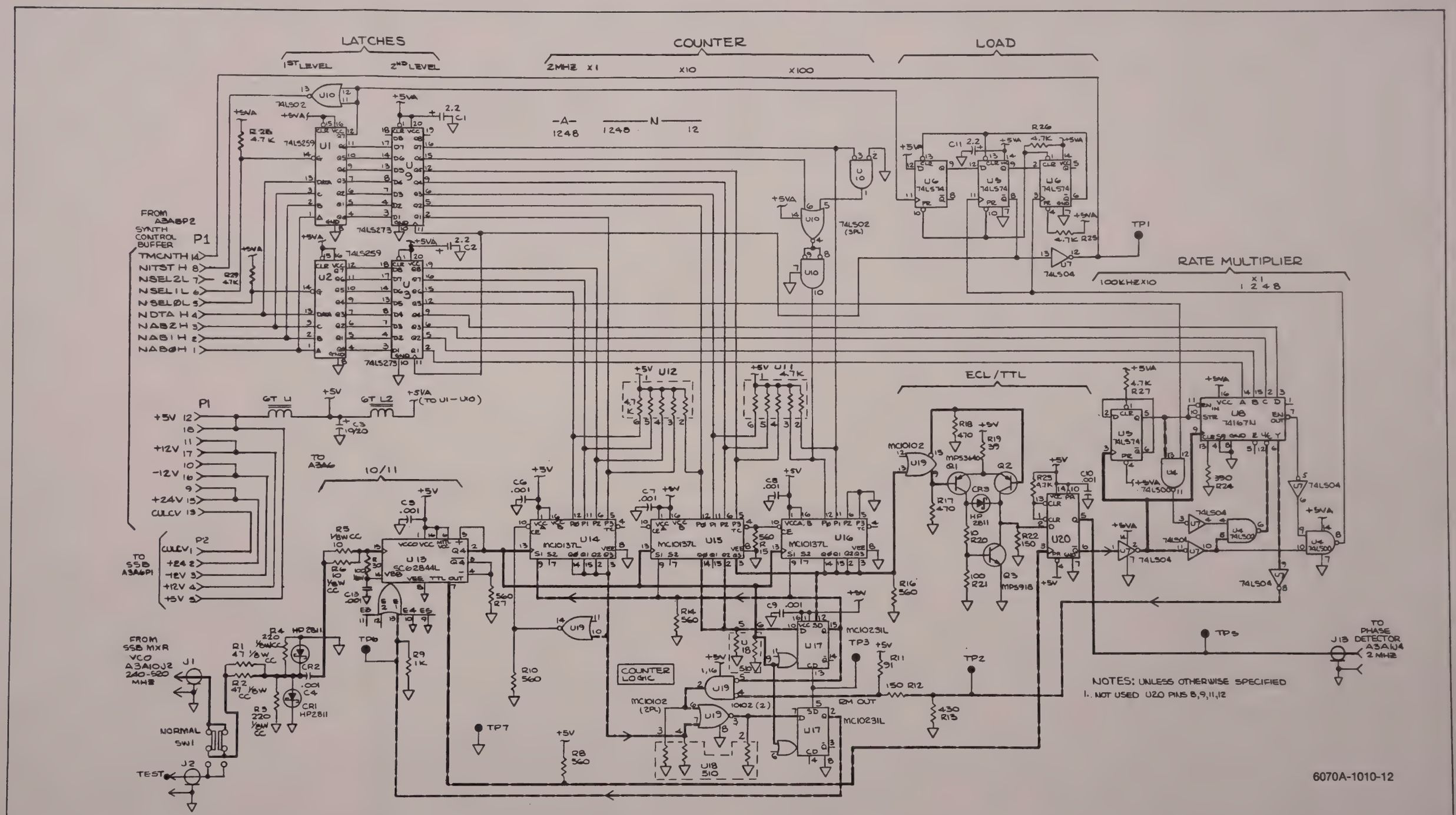
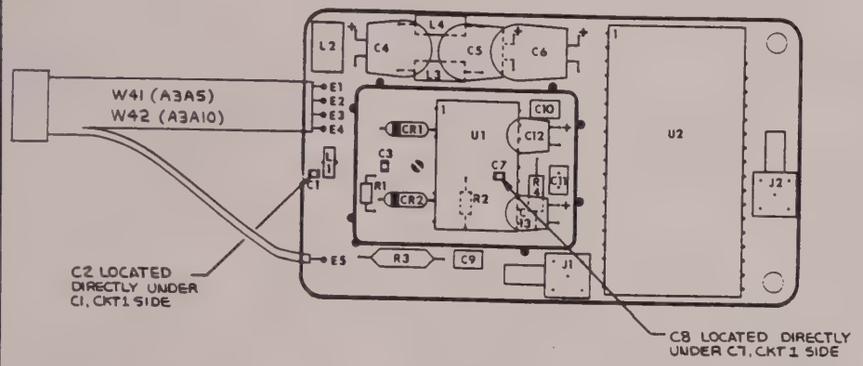
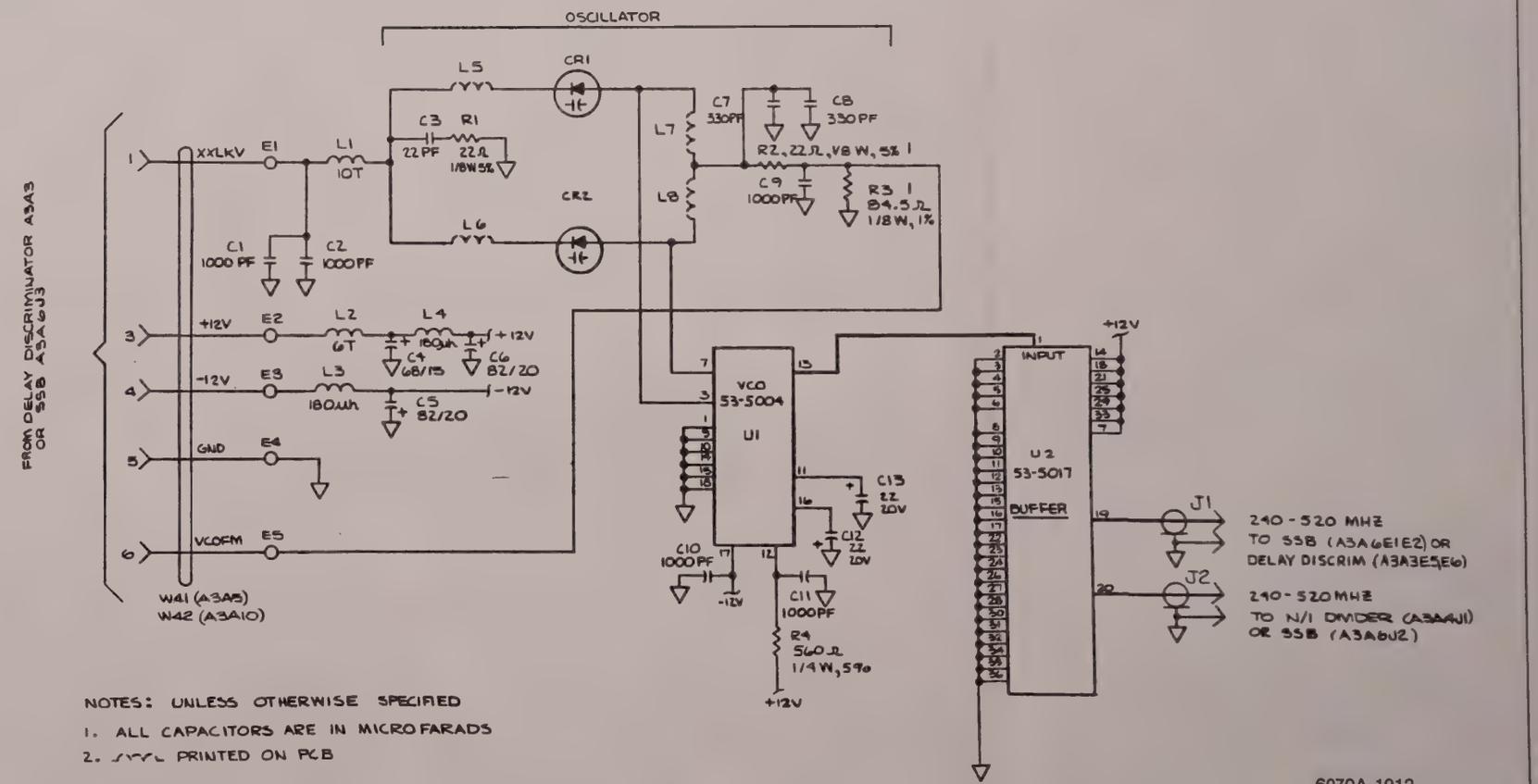


Figure 11. A3A4 N/1 Divider PCB Assembly (cont)



6070A-1612



6070A-1012

Figure 12. A3A5, A3A10 VCO Resonator PCB Assembly

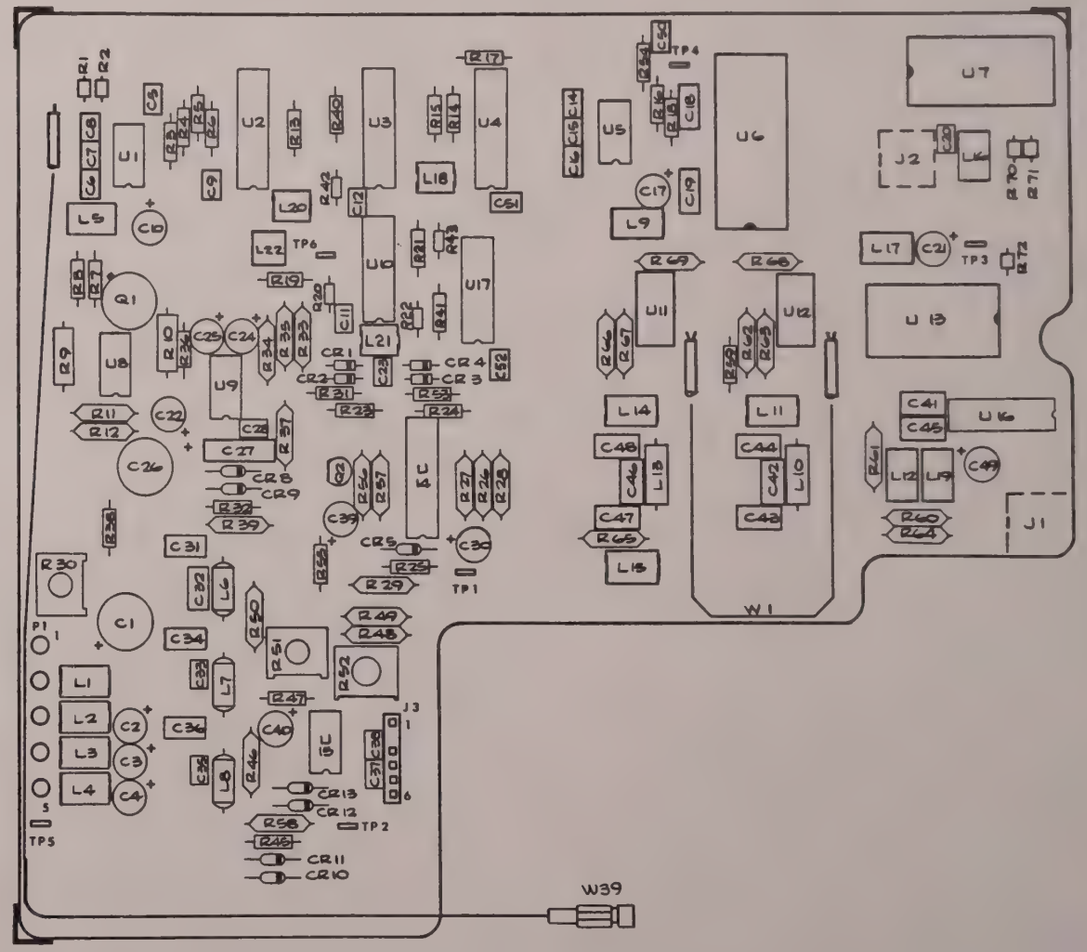


Figure 13. A3A6 Single Sideband Mixer PCB Assembly

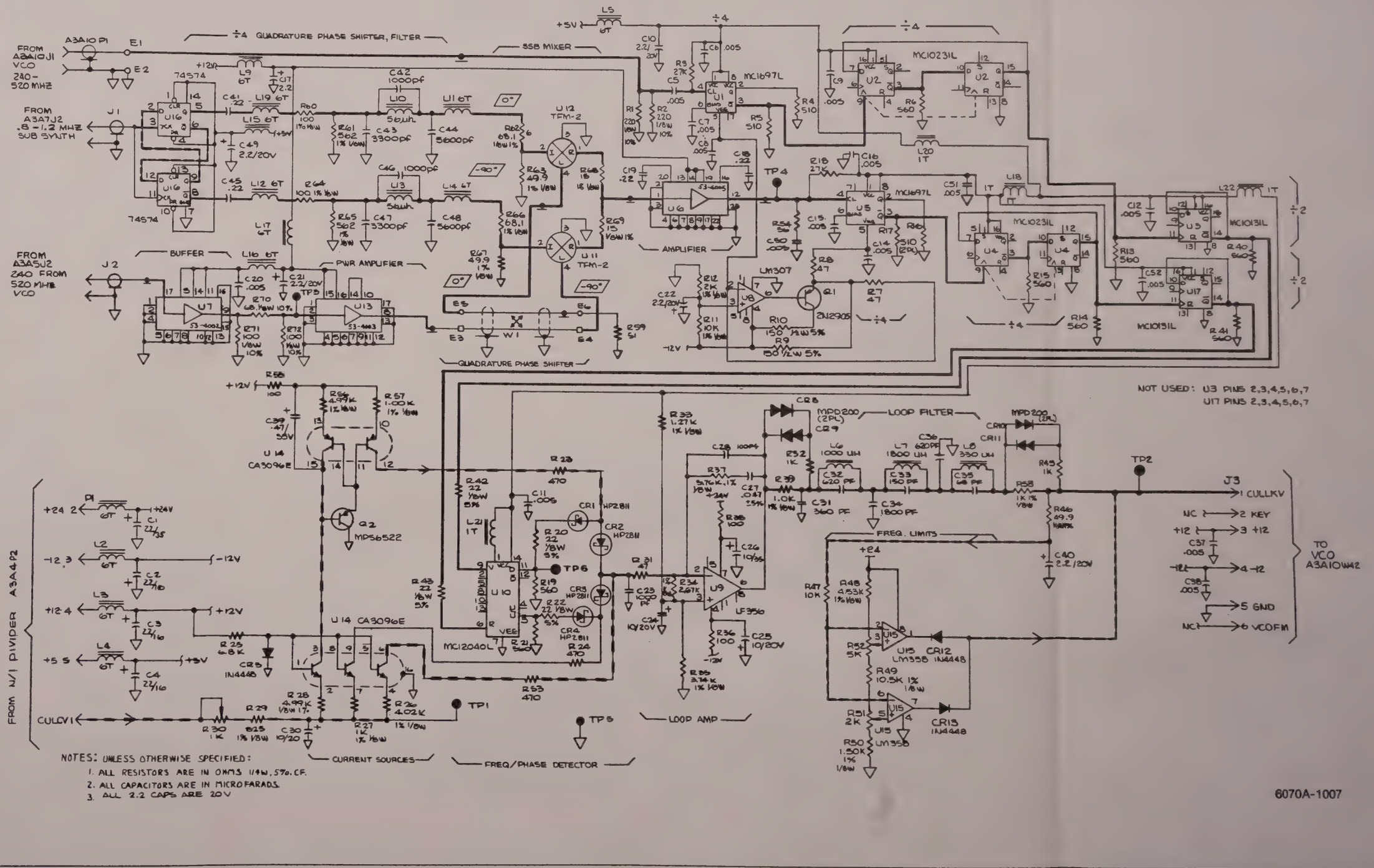


Figure 13. A3A6 Single Sideband Mixer PCB Assembly (cont)

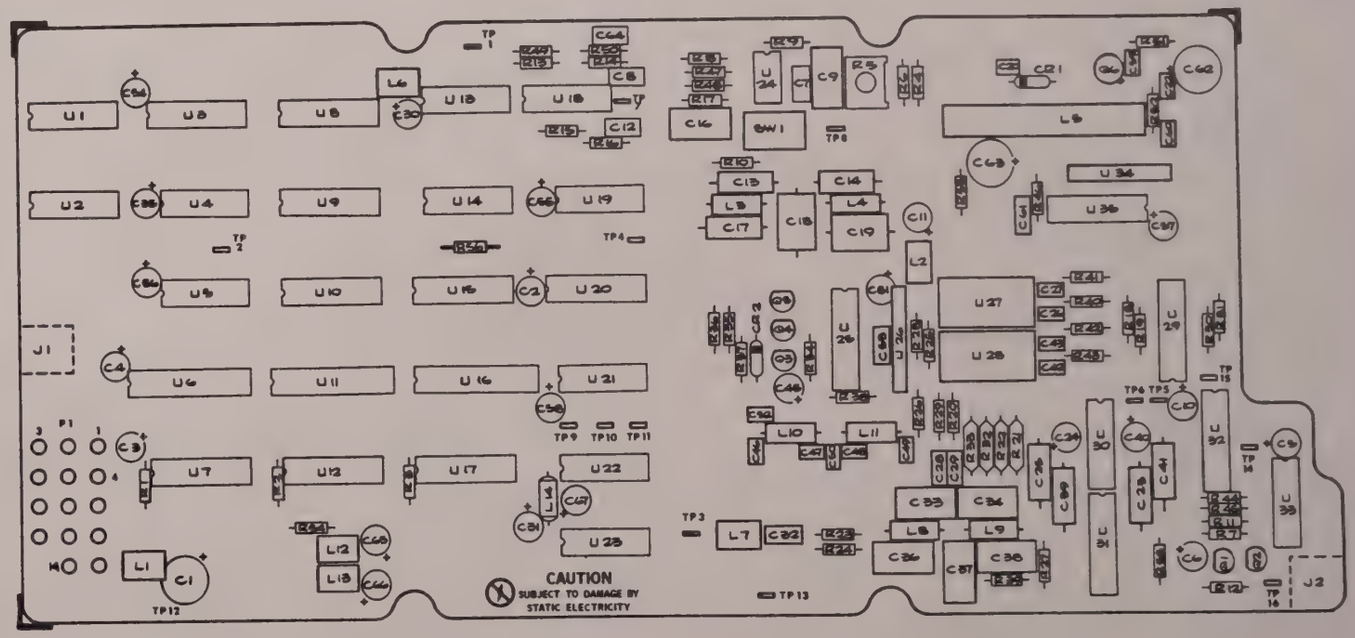
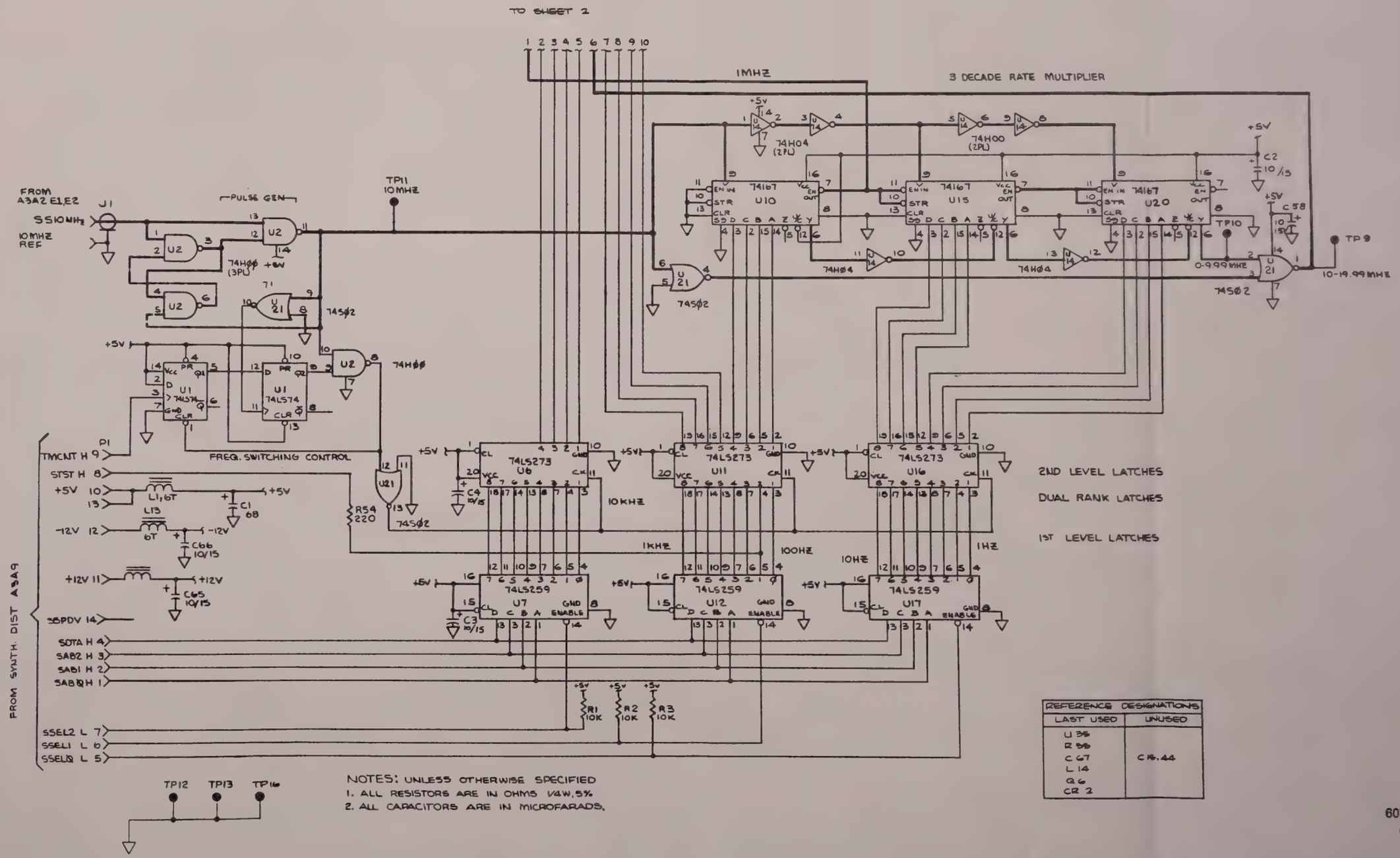


Figure 14. A3A7 Sub Synthesizer PCB Assembly (cont)



REFERENCE DESIGNATIONS	
LAST USED	UNUSED
U 36 R 56 C 67 L 14 Q 6 CR 2	C 15, 44

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(1 of 2)

Figure 14. A3A7 Sub Synthesizer PCB Assembly (cont)

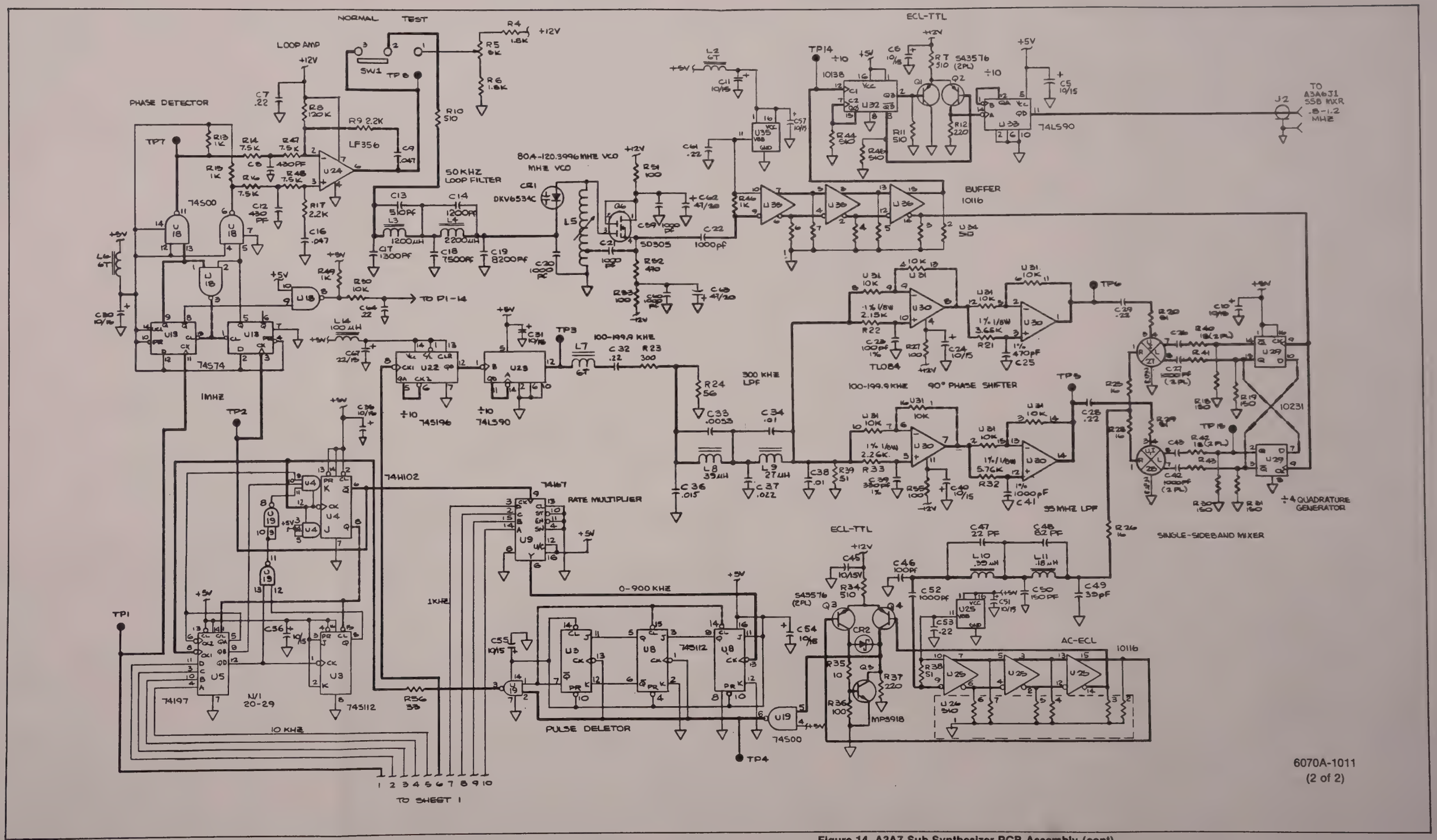


Figure 14. A3A7 Sub Synthesizer PCB Assembly (cont)

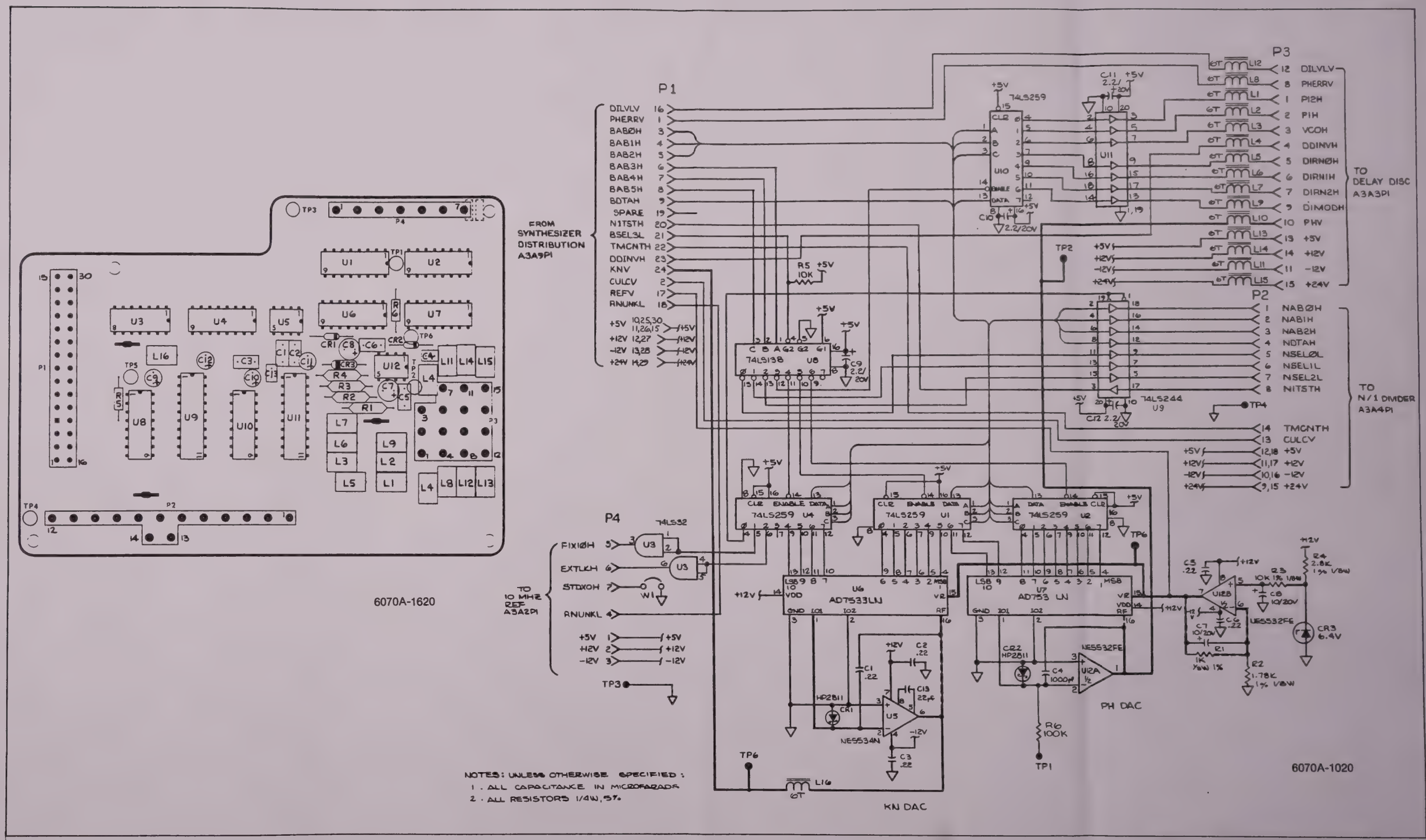
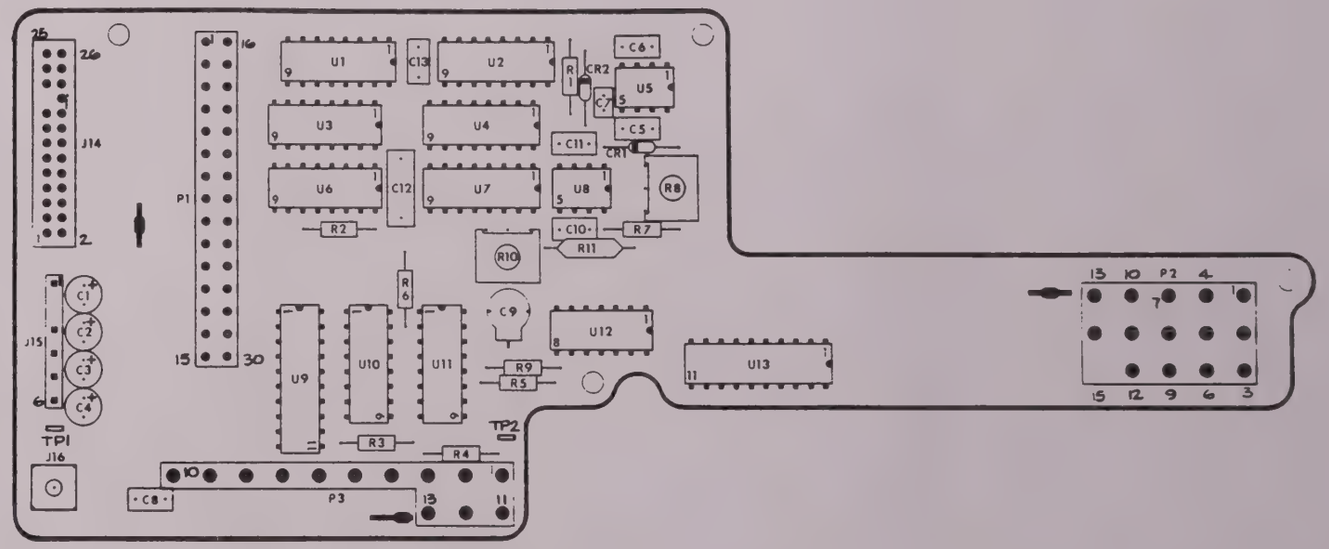
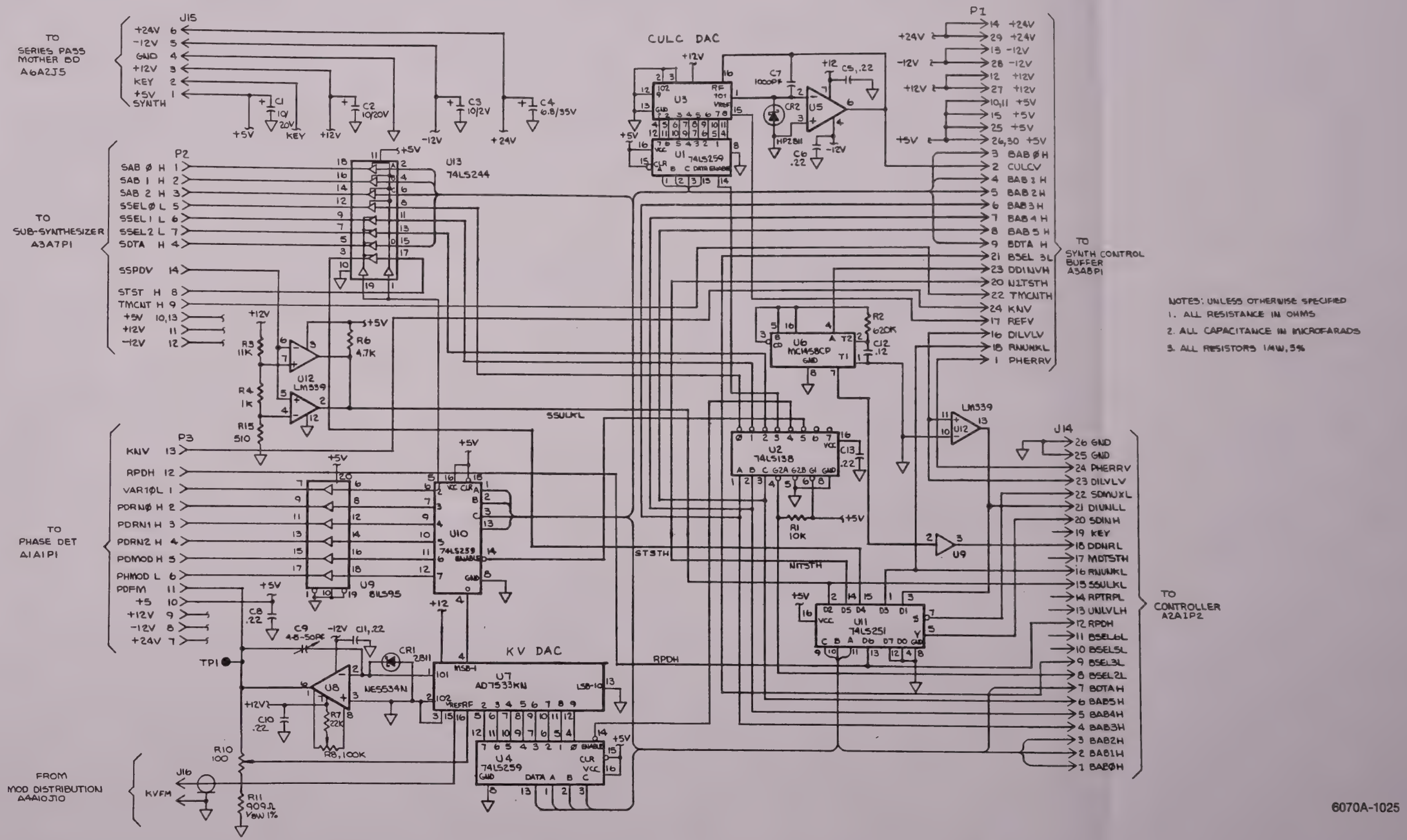


Figure 15. A3A8 Synthesizer Control Buffer PCB Assembly



6070A-1625

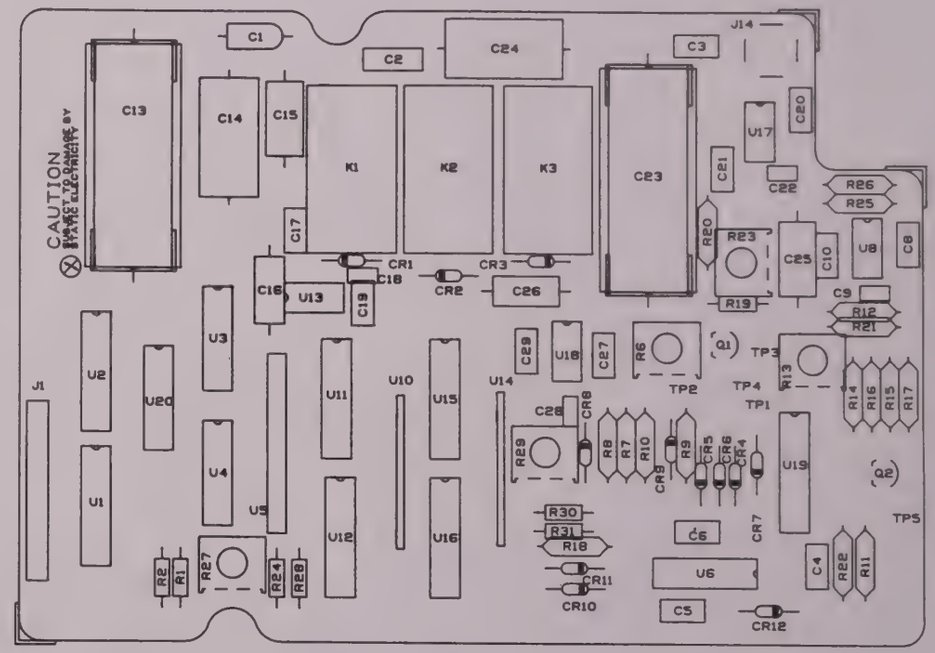
Figure 16. A3A9 Synthesizer Distribution PCB Assembly



NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTANCE IN OHMS
2. ALL CAPACITANCE IN MICROFARADS
3. ALL RESISTORS 1/4W, 5%

6070A-1025

Figure 16. A3A9 Synthesizer Distribution PCB Assembly (cont)



6070A-1626

Figure 17. A4A2 Modulation Oscillator PCB Assembly (cont)

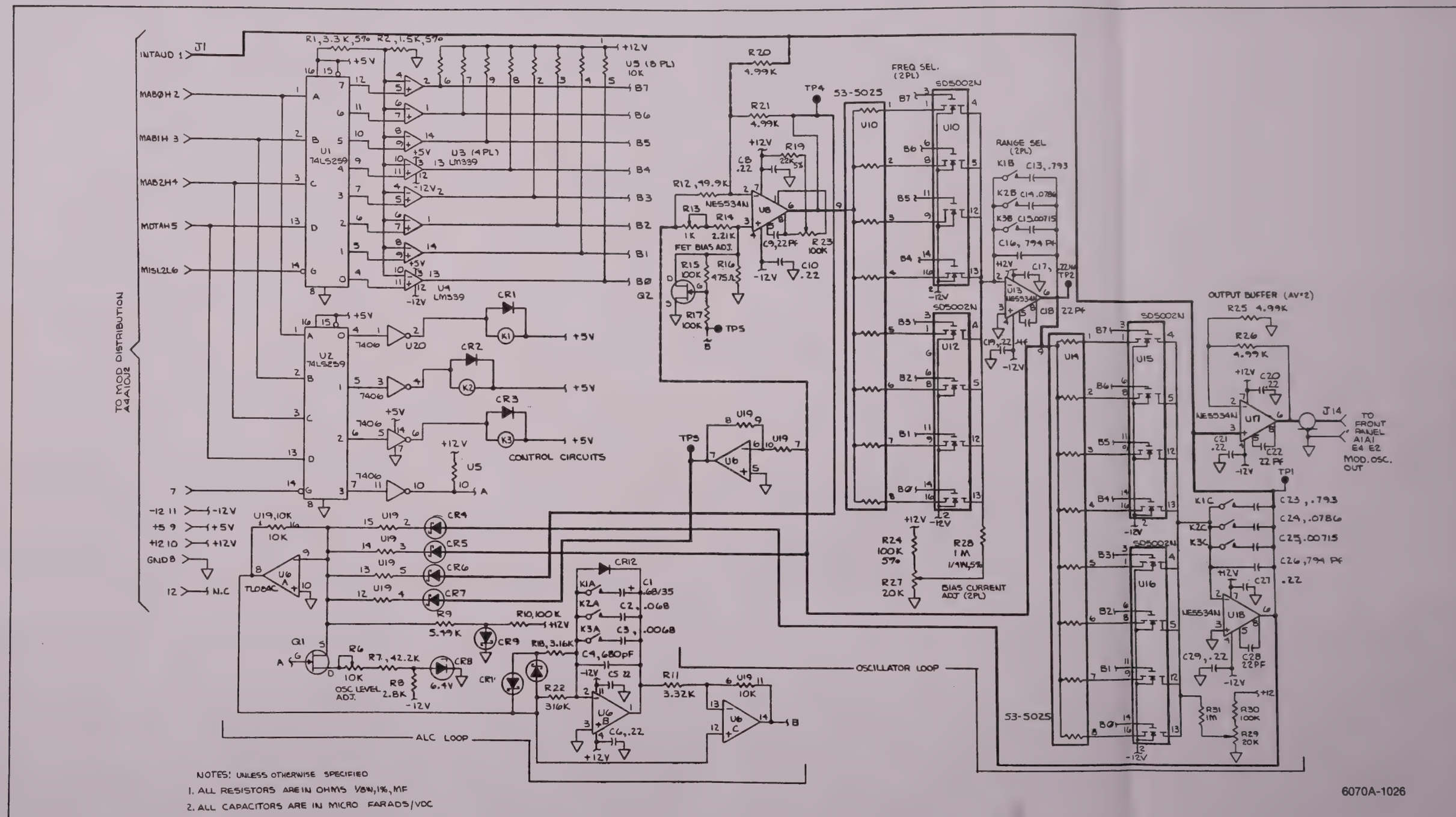
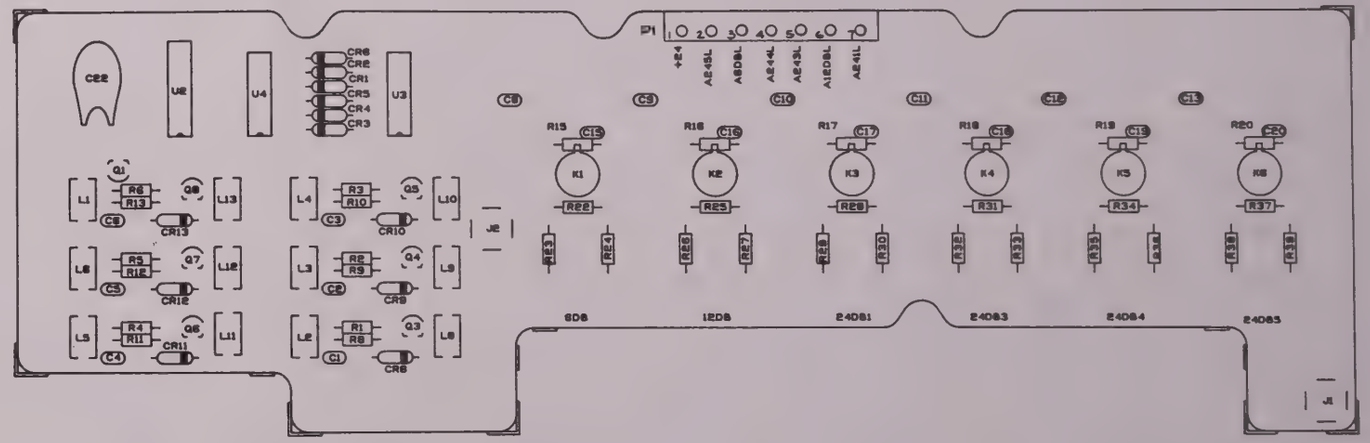
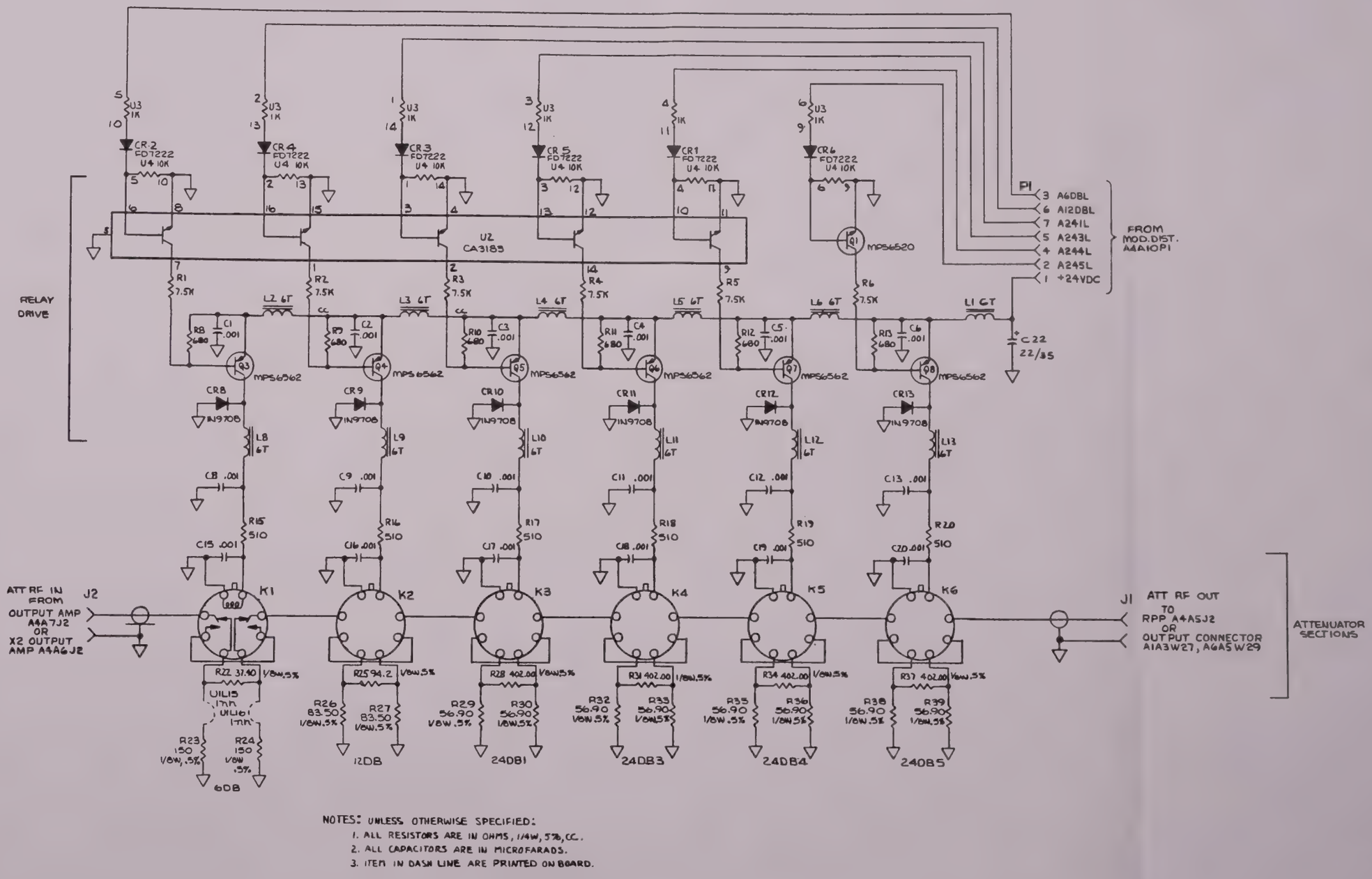


Figure 17. A4A2 Modulation Oscillator PCB Assembly (cont)



6070A-1605

Figure 18. A4A3 Attenuator PCB Assembly

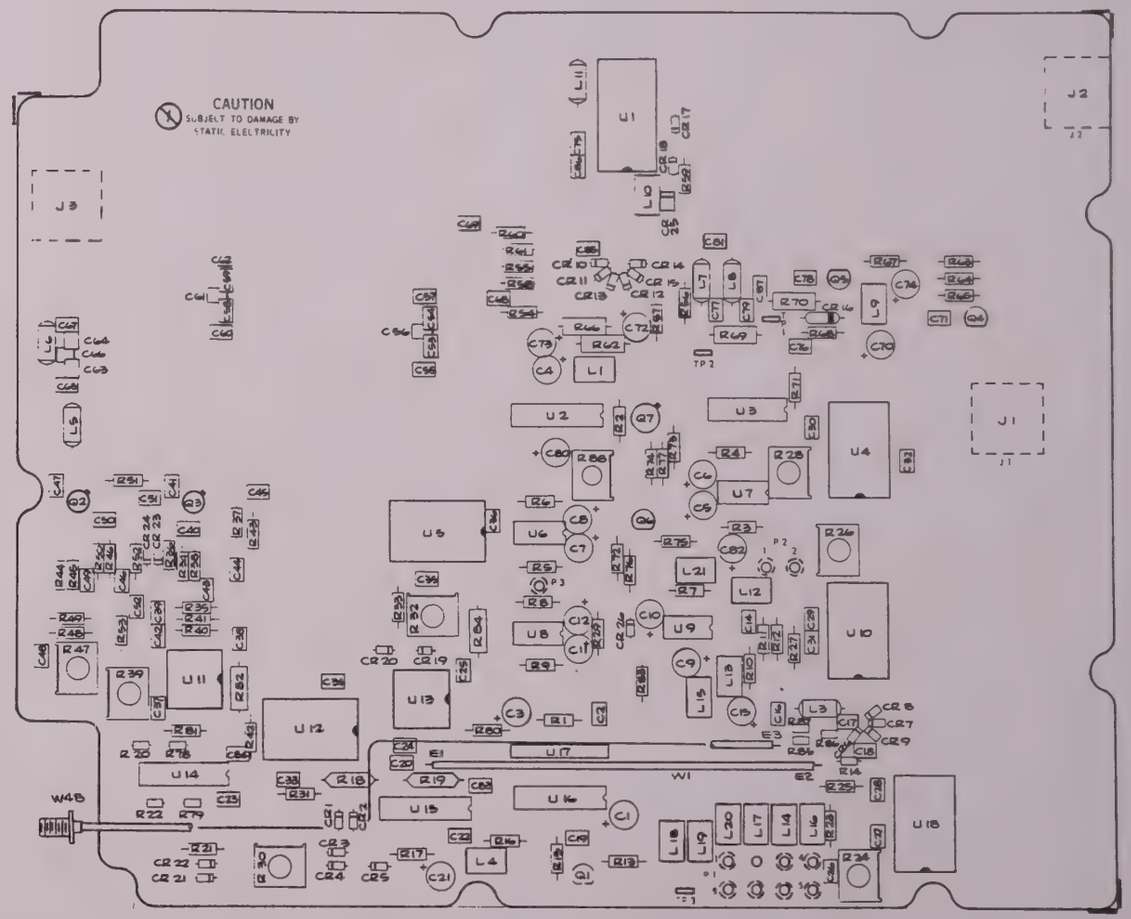


NOTES: UNLESS OTHERWISE SPECIFIED:

1. ALL RESISTORS ARE IN OHMS, 1/4W, 5%, CC.
2. ALL CAPACITORS ARE IN MICROFARADS.
3. ITEM IN DASH LINE ARE PRINTED ON BOARD.

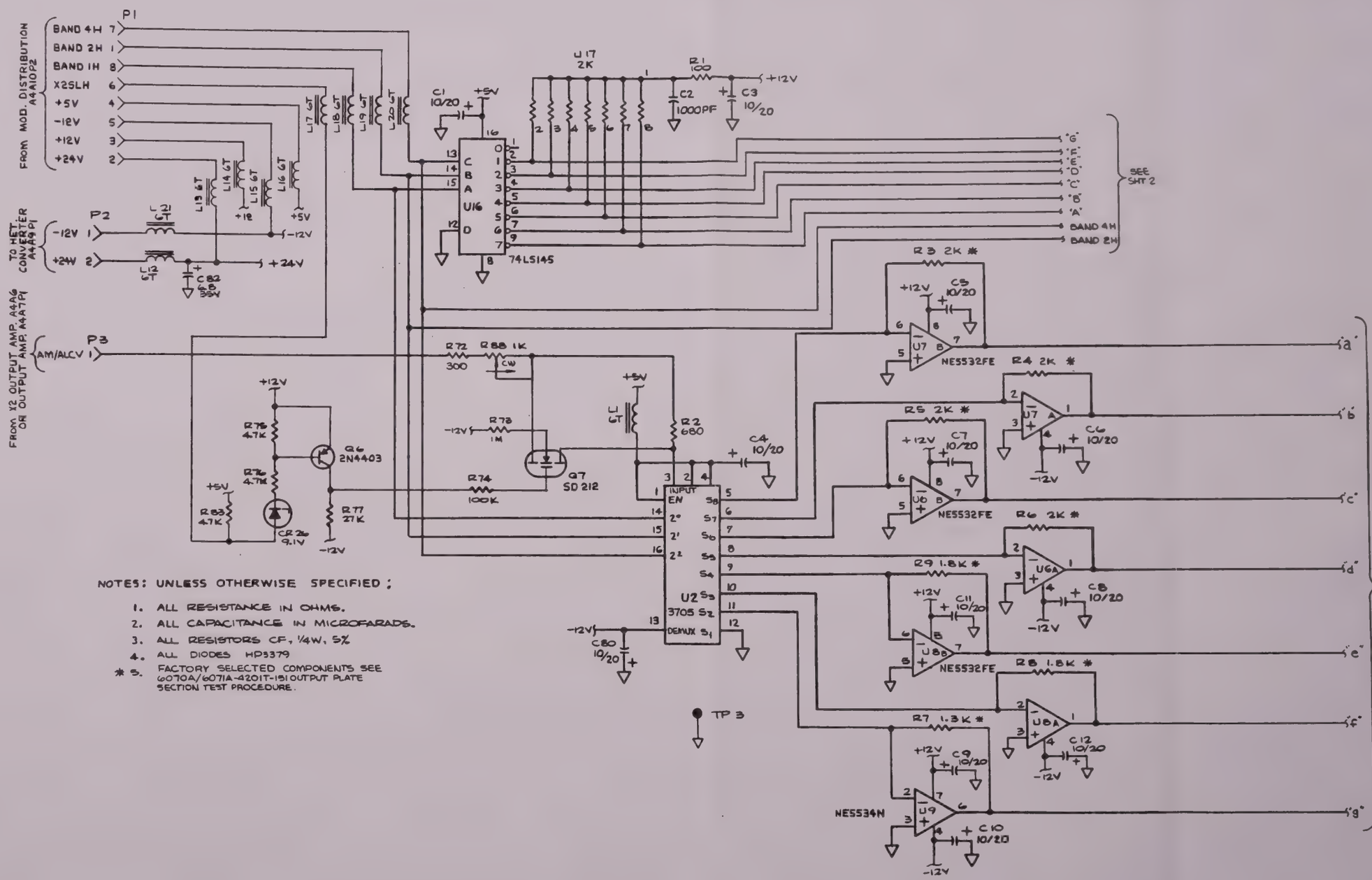
6070A-1005

Figure 18. A4A3 Attenuator PCB Assembly (cont)



6070A-1616

Figure 19. A4A4 Modulator Divider PCB Assembly



NOTES: UNLESS OTHERWISE SPECIFIED;

1. ALL RESISTANCE IN OHMS.
2. ALL CAPACITANCE IN MICROFARADS.
3. ALL RESISTORS CF, 1/4W, 5%
4. ALL DIODES HP3379

* 5. FACTORY SELECTED COMPONENTS SEE 6070A/6071A-4201T-151 OUTPUT PLATE SECTION TEST PROCEDURE.

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Figure 19. A4A4 Modulator Divider PCB Assembly (cont)

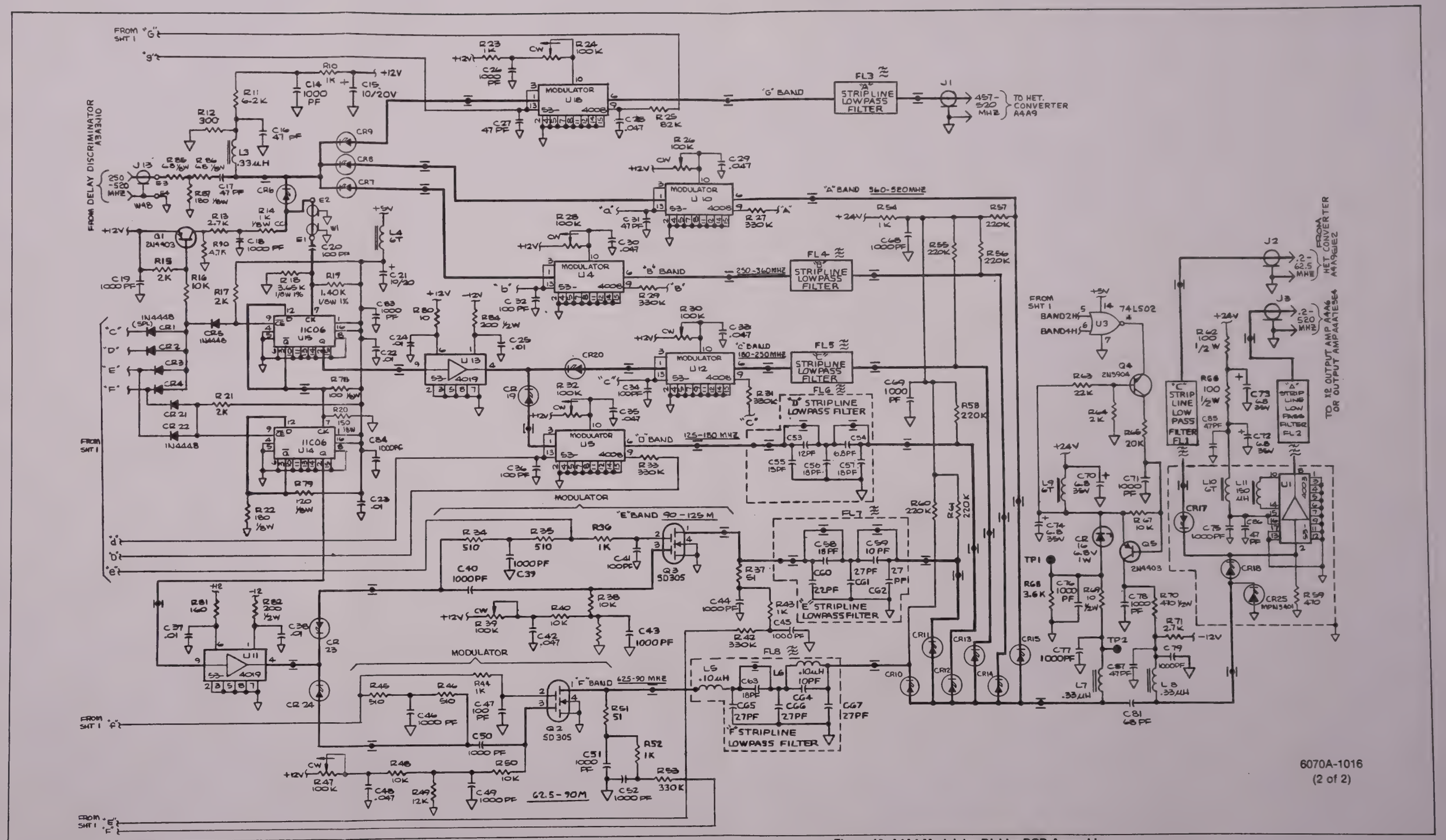
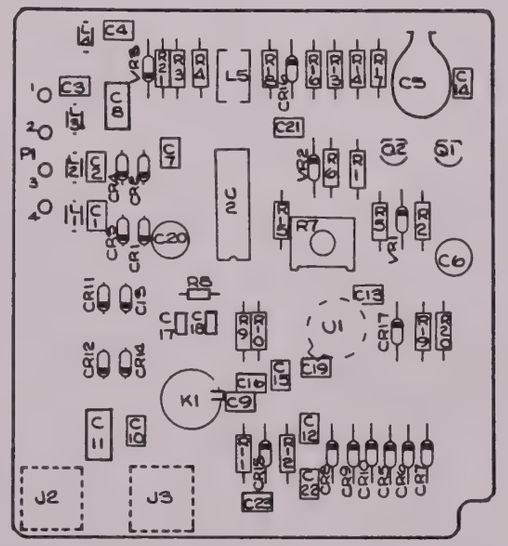
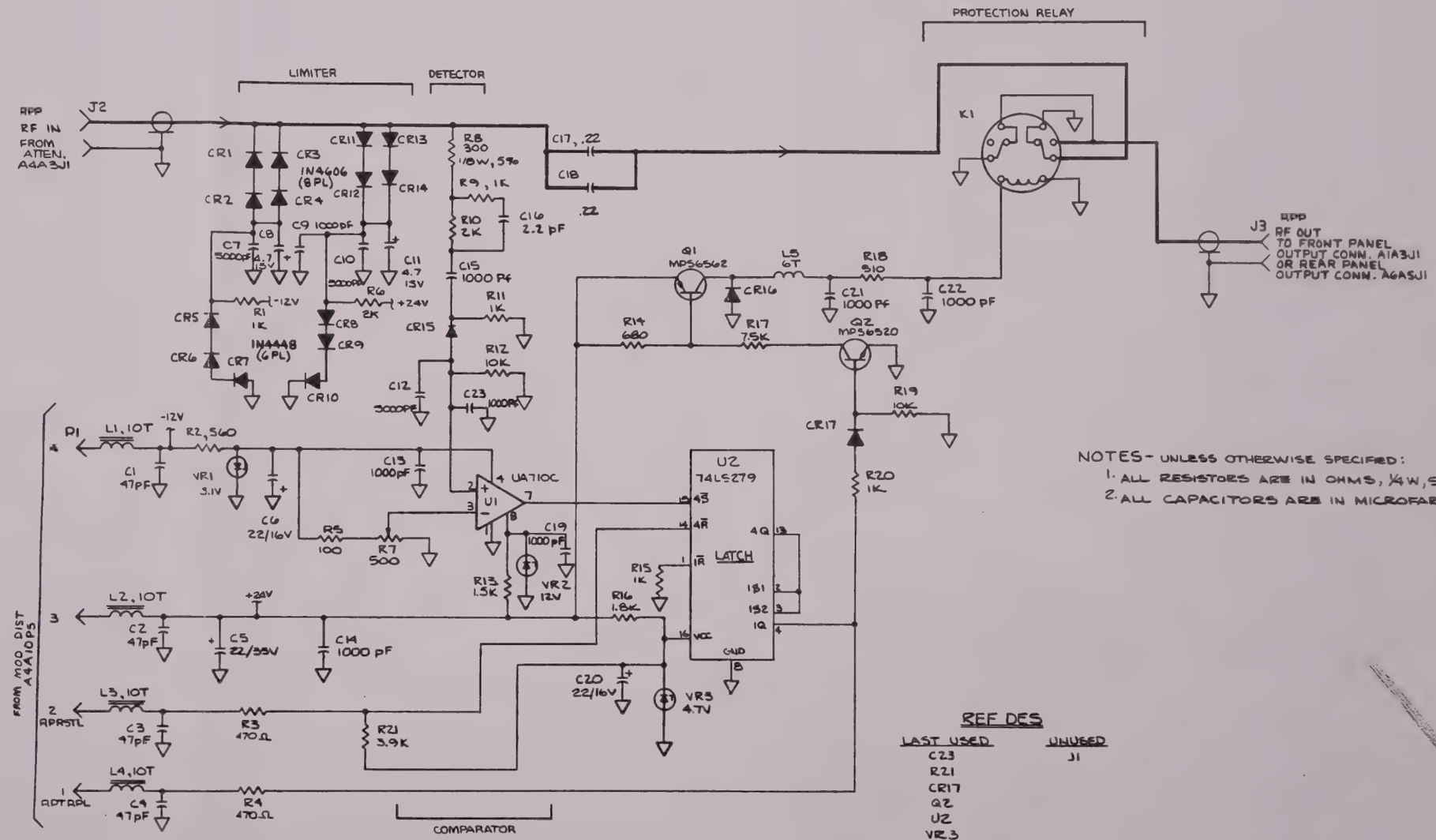


Figure 19. A4A4 Modulator Divider PCB Assembly (cont)



6070A-1624

Figure 20. A4A5 Reverse Power Protect PCB Assembly



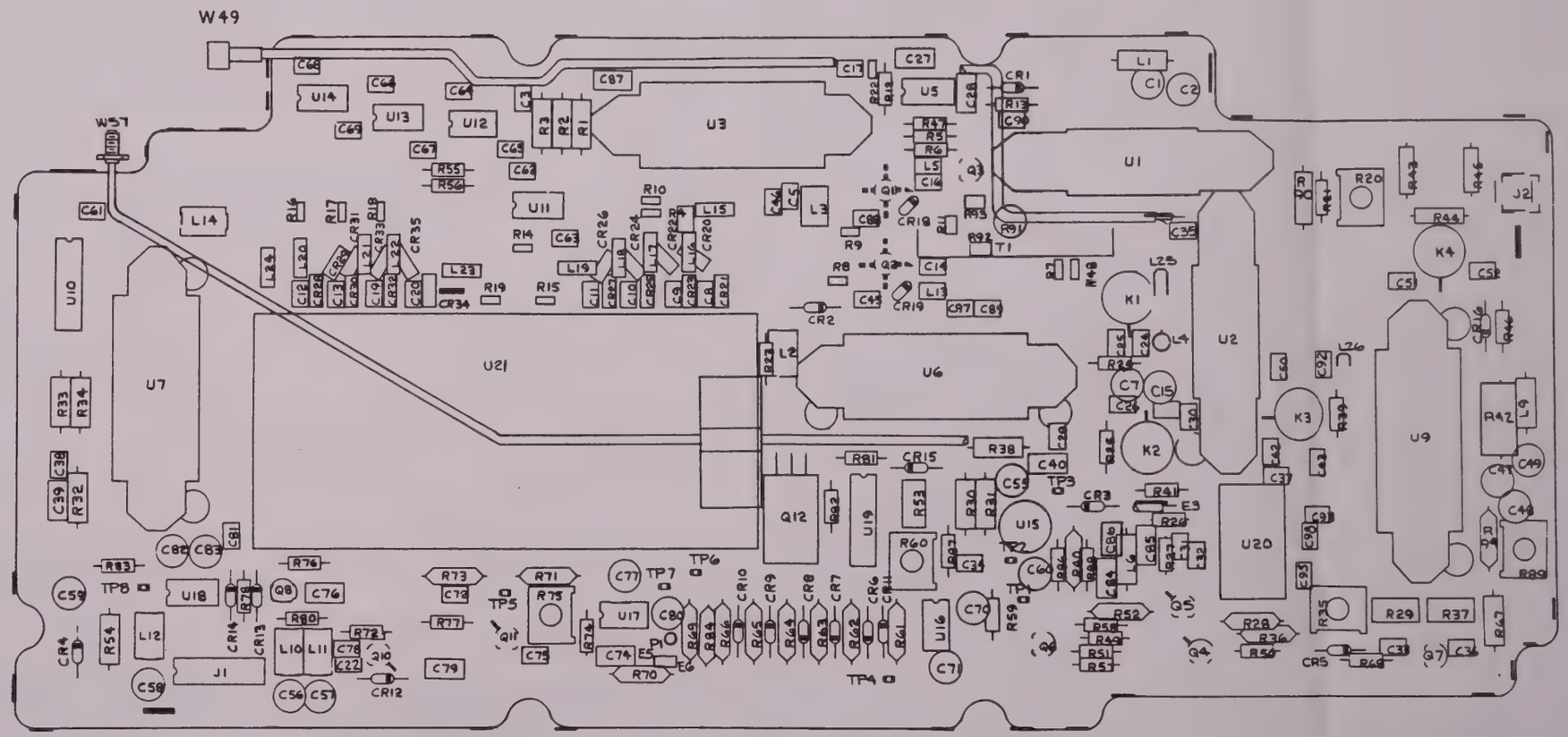
NOTES- UNLESS OTHERWISE SPECIFIED:
1. ALL RESISTORS ARE IN OHMS, ¼W, 5%, CC.
2. ALL CAPACITORS ARE IN MICROFARADS.

REF DES

LAST USED	UNUSED
C23	J1
R21	
CR17	
Q2	
U2	
VR3	
L5	
K1	
J3	
C5	

6070A-1024

Figure 20. A4A5 Reverse Power Protect PCB Assembly (cont)



6071A-1617

Figure 21. A4A6 Times Two Output Amplifier PCB Assembly (6071A Only)

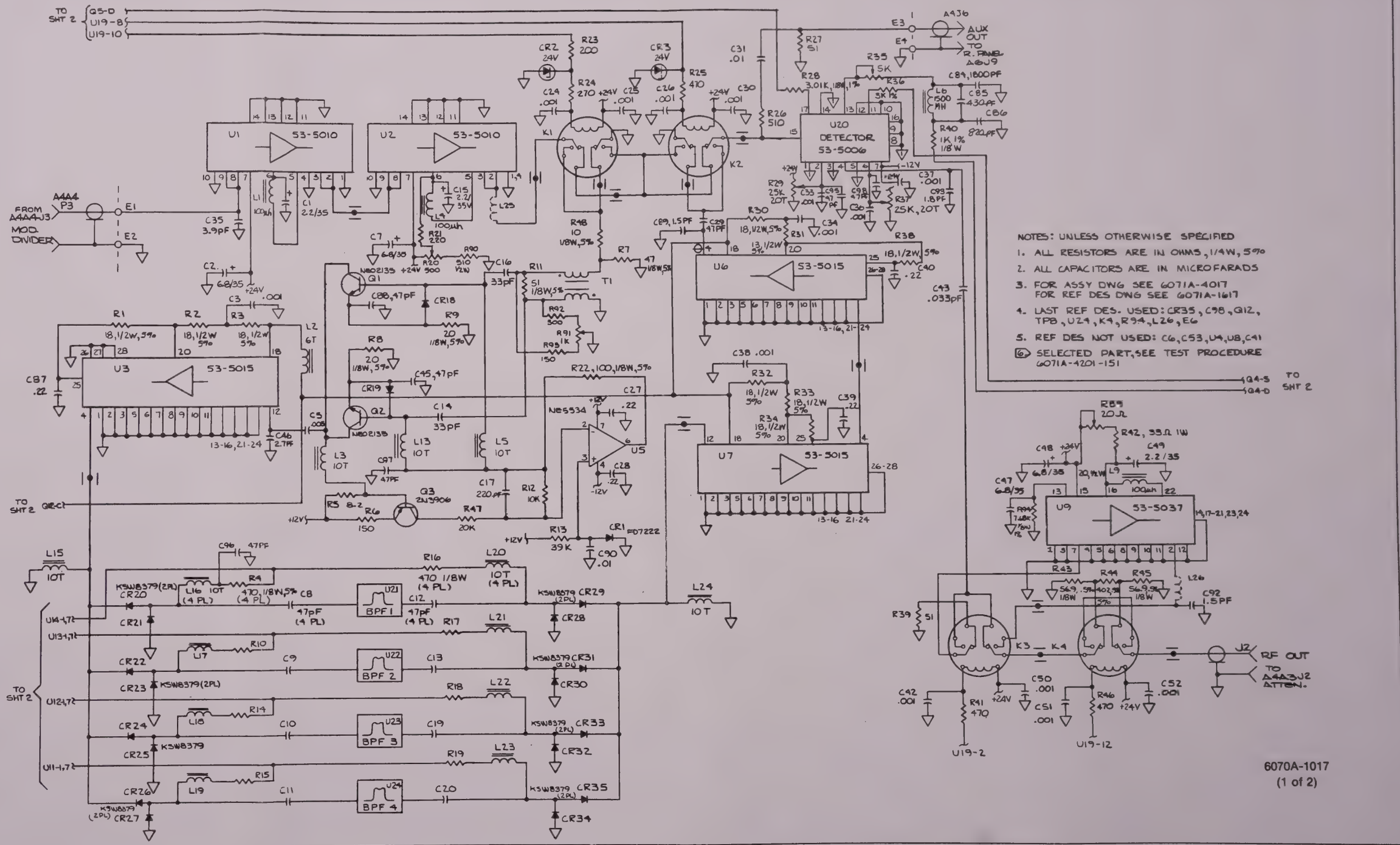


Figure 21. A4A6 Times Two Output Amplifier PCB Assembly (6071A Only) (cont)

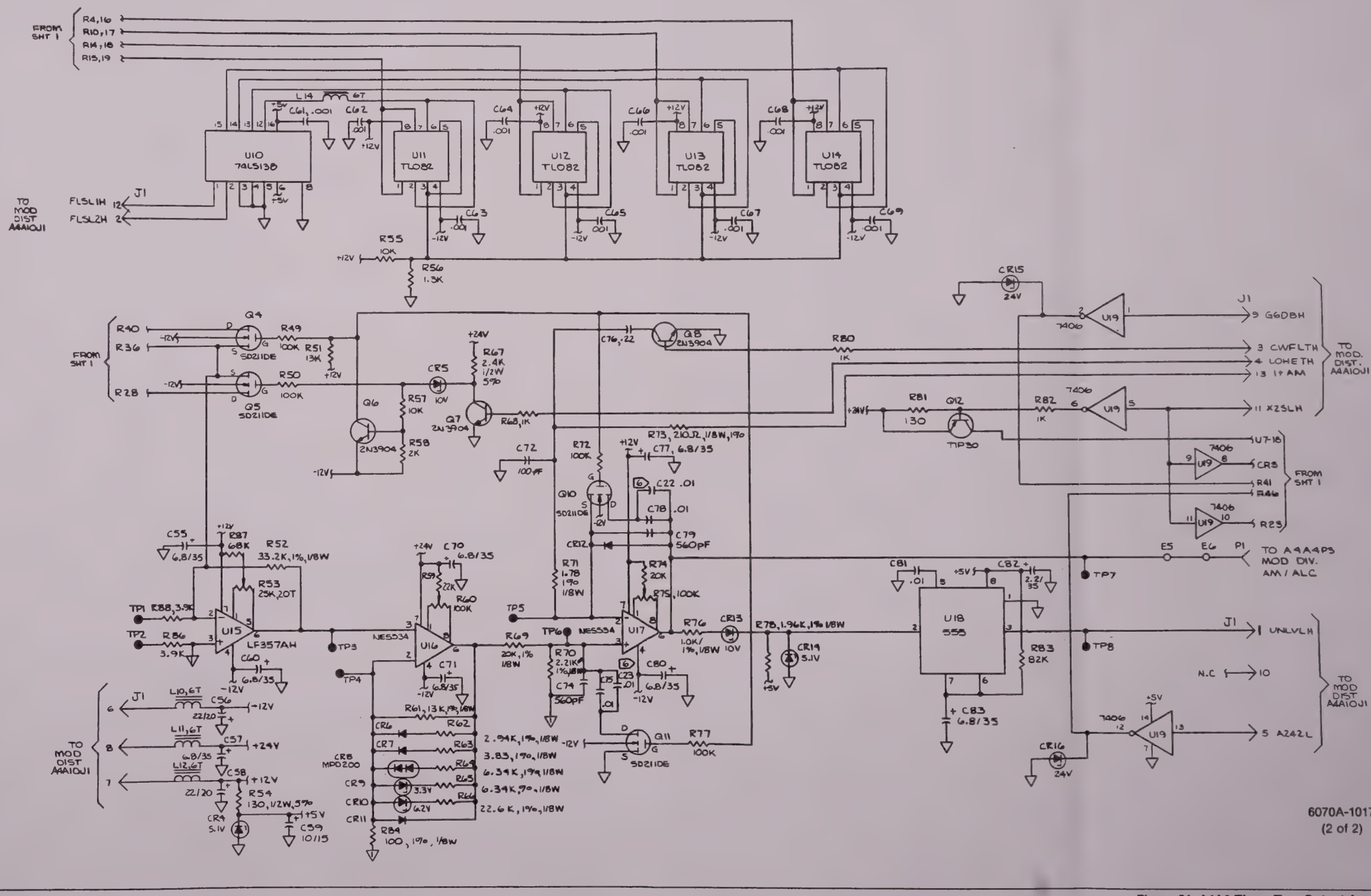


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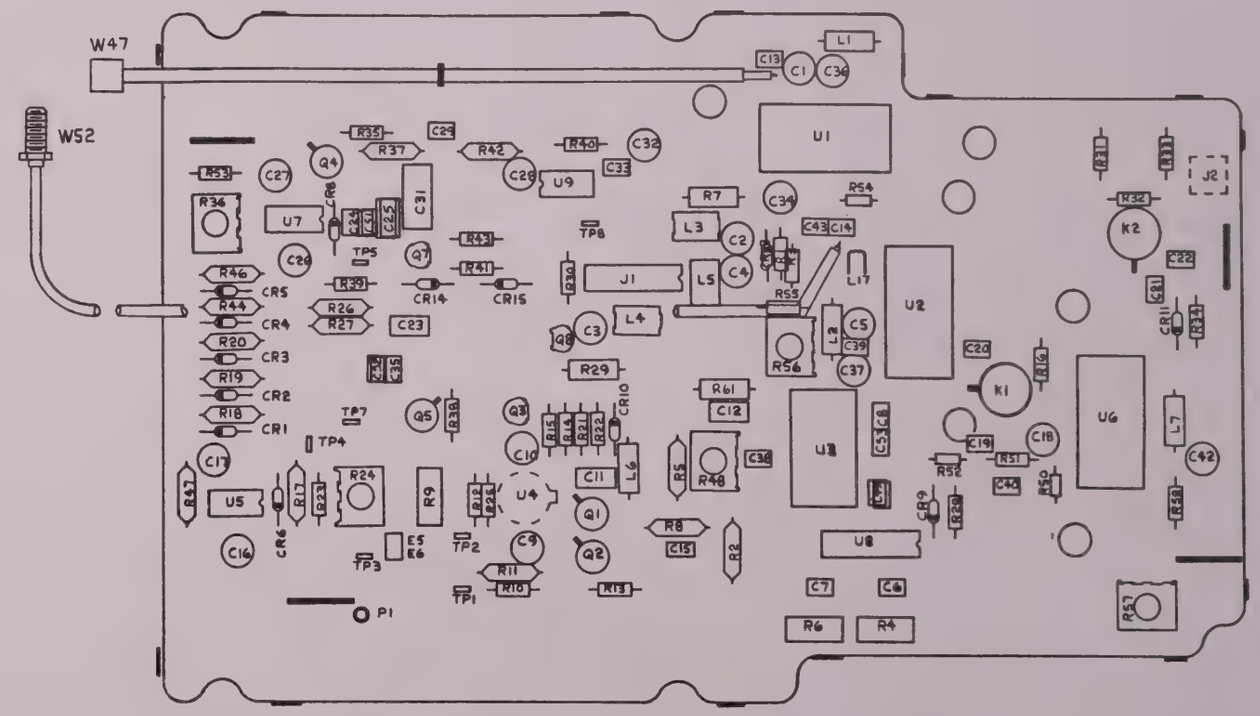
Figure 21. A4A6 Times Two Output Amplifier PCB Assembly (6071A Only) (cont)



6070A-1606

Figure 22. A4A7 Output Amplifier PCB Assembly (6070A Only)

BOOSTER AMP & SWITCH

24 DB ATTENUATOR

.2-520MHz FROM MOD DIV A4A4J3 INPUT

U1 53-5010 U2 53-5010 U6 53-5010

DETECTOR U3, 53-5006

U4 LF357AH DETECTOR AMP

U5 NE5534N LINEARIZER

U7 NE5534N SUMMING INTEGRATOR

U8 7406

U9 555

J2 AMP RF OUT TO A4A3J2 ATTENUATOR

J1 5 A24 2L

9 G6DBH

4 LOHETH

1 UNLVLH

13 1HAM

3CWFLTH

TO MOD DIST A4A10J1

E1 E2 J63 TO AUX OUT REAR PANEL A6J9

E5 E6 D1 AM/ALCV TO MOD. DIV. A4A4P3

UNLEVELED INDICATOR CIRCUIT

TO MOD DIST A1A10J1

FROM MOD DIST A4A10J1

ALC CIRCUITRY

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL RESISTORS ARE IN OHMS, 1/4W, 5%,
2. ALL CAPACITORS ARE IN MICROFARADS
3. ⏦ IS PRINTED ON PCB

6070A-1006

Figure 22. A4A7 Output Amplifier PCB Assembly (6070A Only) (cont)

TO MOD DISTRIBUTION A4A10P3

NOTES : UNLESS OTHERWISE NOTED

1. ALL RESISTANCE IN OHMS , ALL RESISTORS ARE 1/4 W, 5% .
2. ALL CAPACITANCE IN MICROFARADS .
3. ⏤● STRIPLINE 50Ω CHARACTERISTIC IMPEDANCE .

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(1 of 1)

Figure 23. A4A8 Heterodyne Oscillator PCB Assembly

NOTES : UNLESS OTHERWISE NOTED

1. ALL RESISTANCE IN OHMS , ALL RESISTORS ARE 1/4 W, 5% .
2. ALL CAPACITANCE IN MICROFARADS .
3. ⊙ STRIPLINE 50Ω CHARACTERISTIC IMPEDANCE .

6070A-1015

Figure 23. A4A8 Heterodyne Oscillator PCB Assembly (cont)

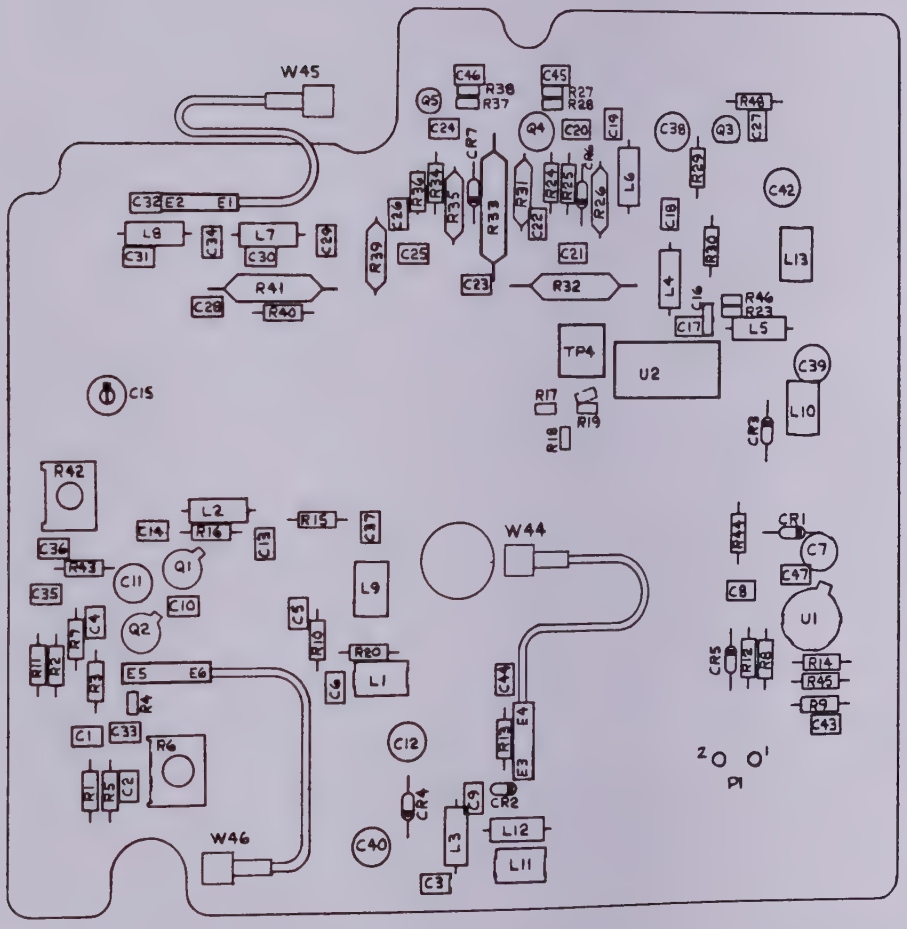
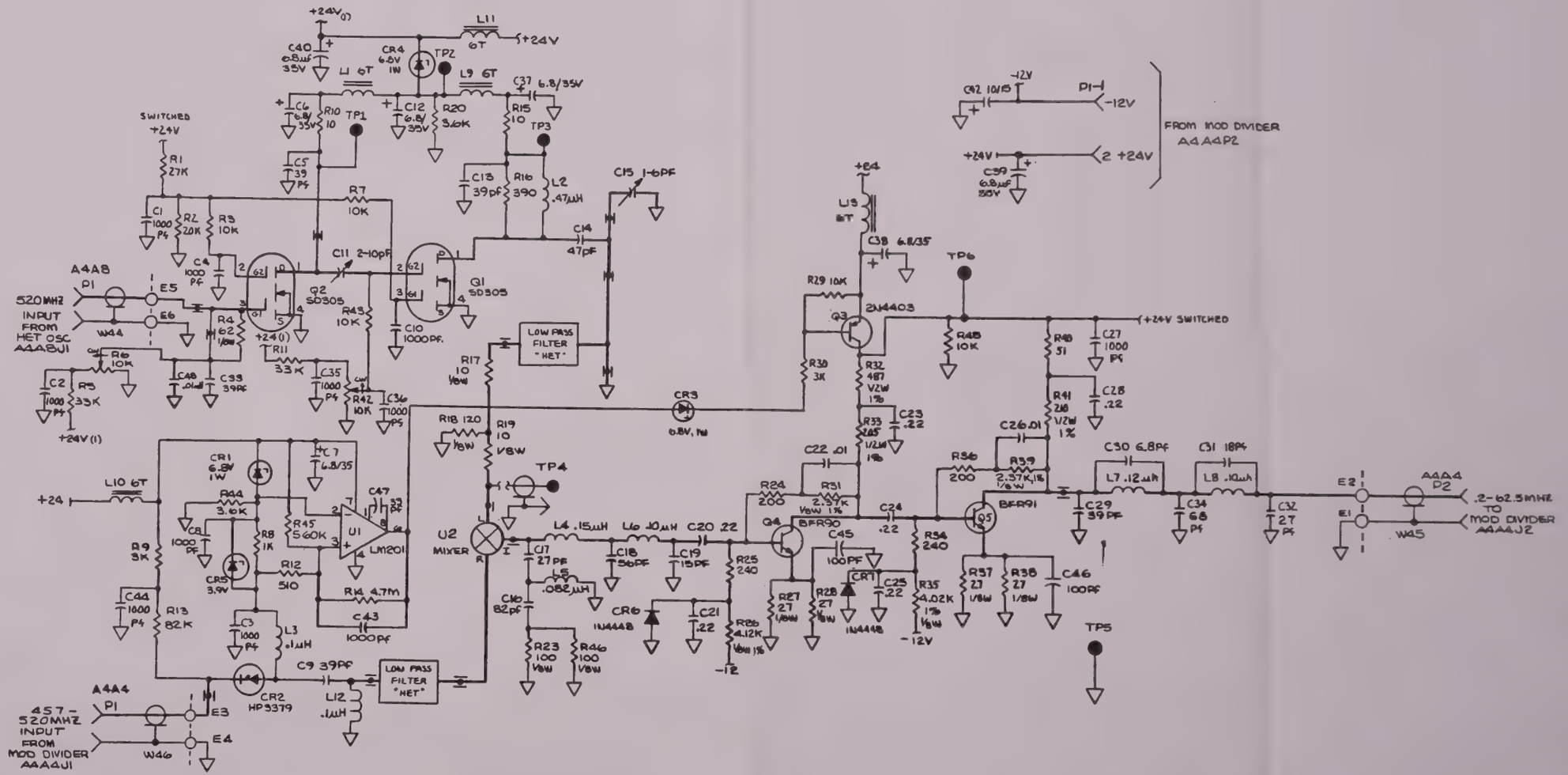


Figure 24. A4A9 Heterodyne Converter PCB Assembly



NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS ARE IN OHMS 1/4 5%.
2. ALL CAPACITORS ARE IN MICROFARADS.
3. ⏚ STRIP LINE

6070A-1031

Figure 24. A4A9 Heterodyne Converter PCB Assembly (cont)

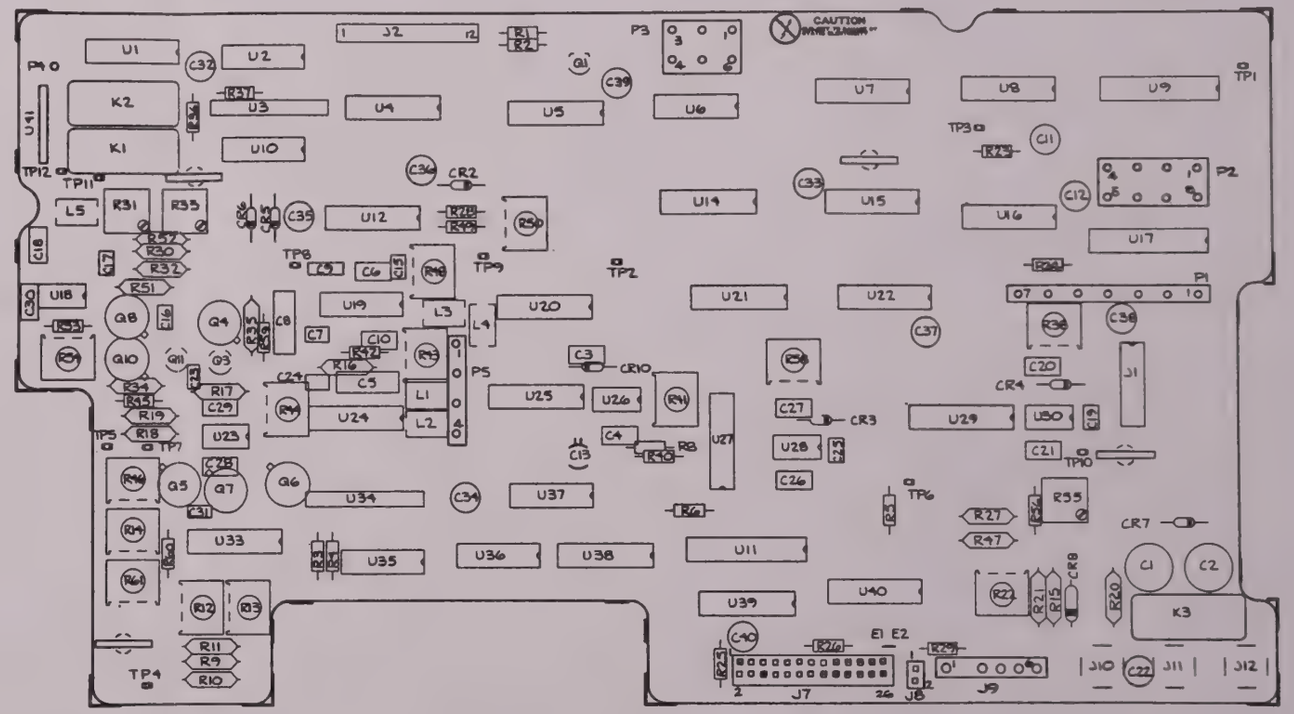
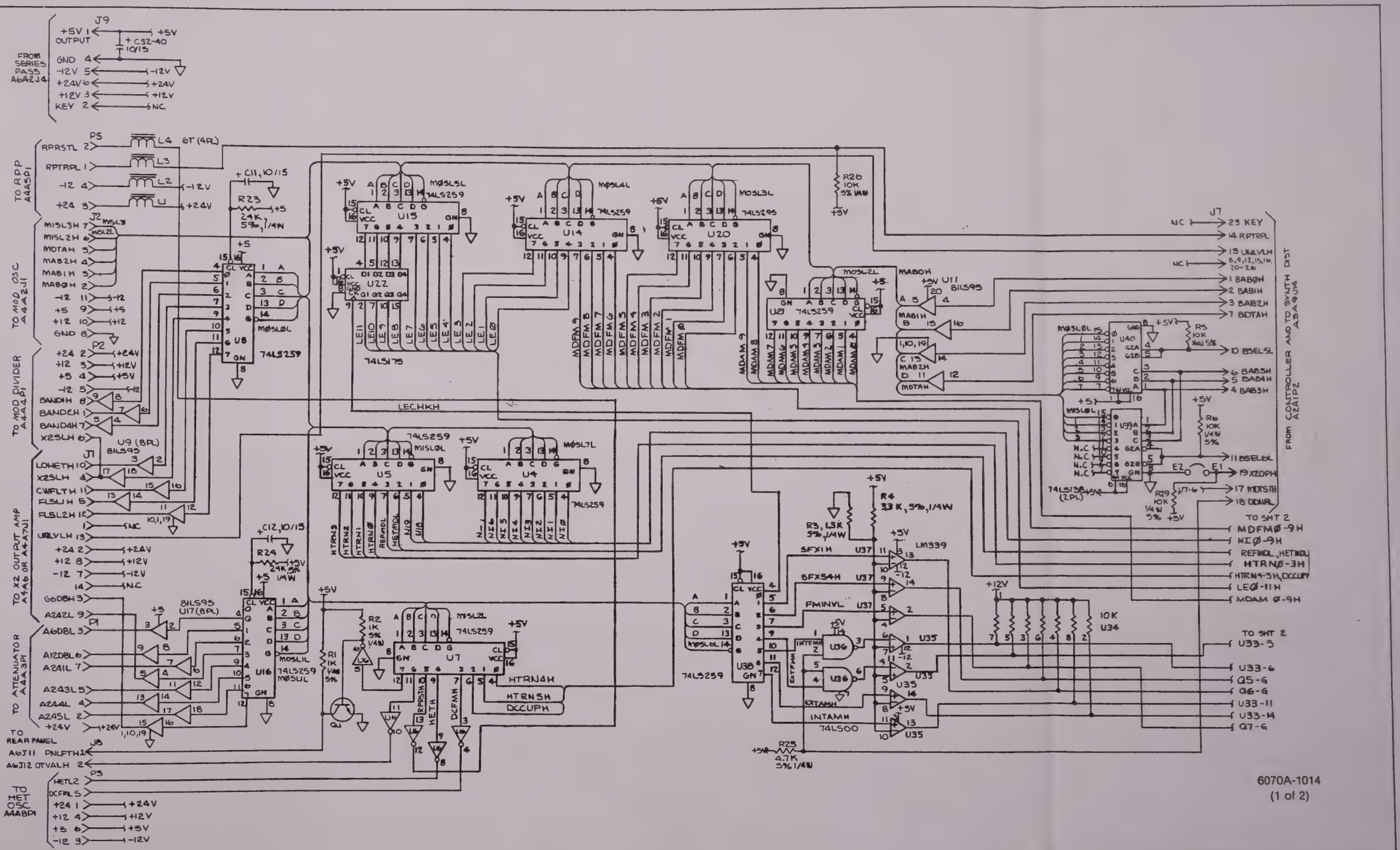


Figure 25. A4A10 Modulation Distribution PCB Assembly



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(1 of 2)

Figure 25. A4A10 Modulation Distribution PCB Assembly (cont)

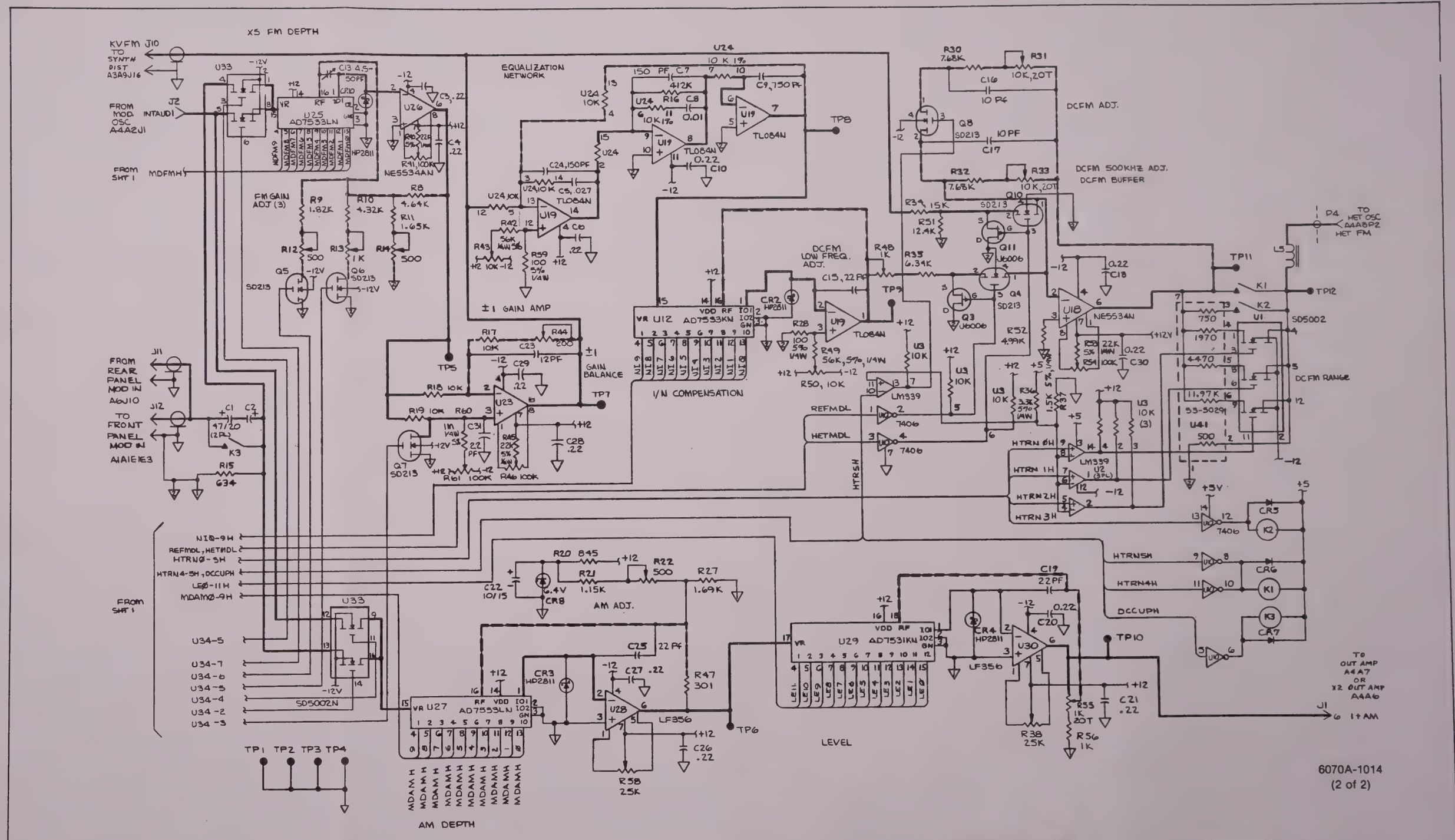
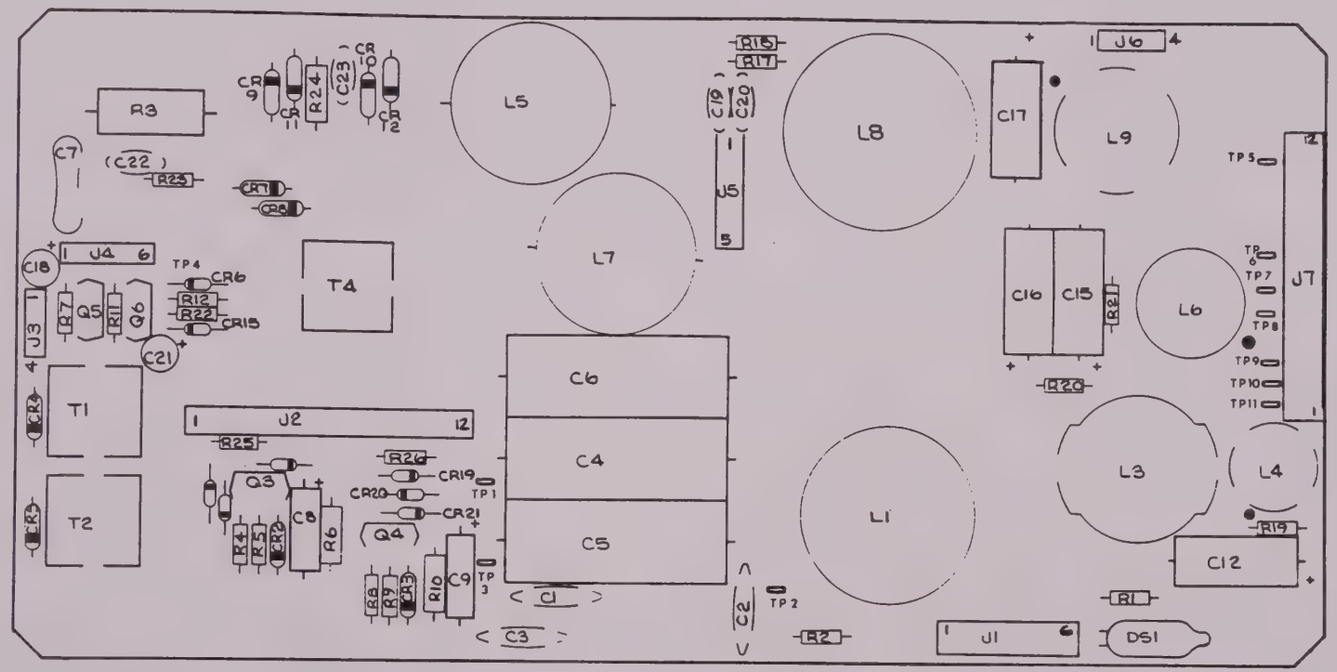


Figure 25. A4A10 Modulation Distribution PCB Assembly (cont)



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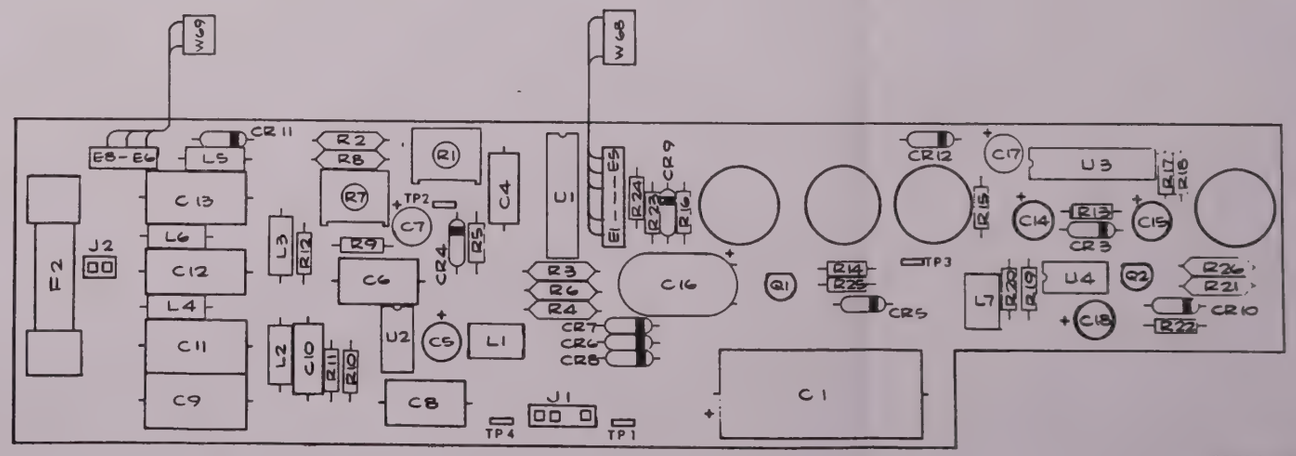

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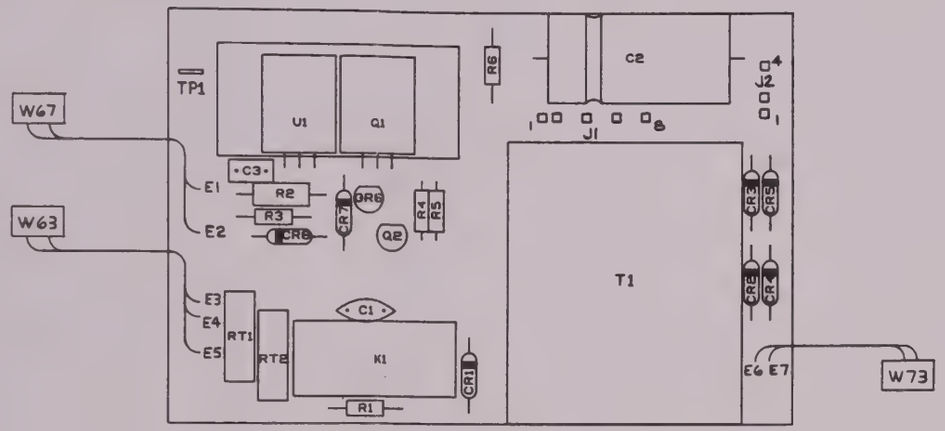
Figure 26. A5 Power Supply Assembly



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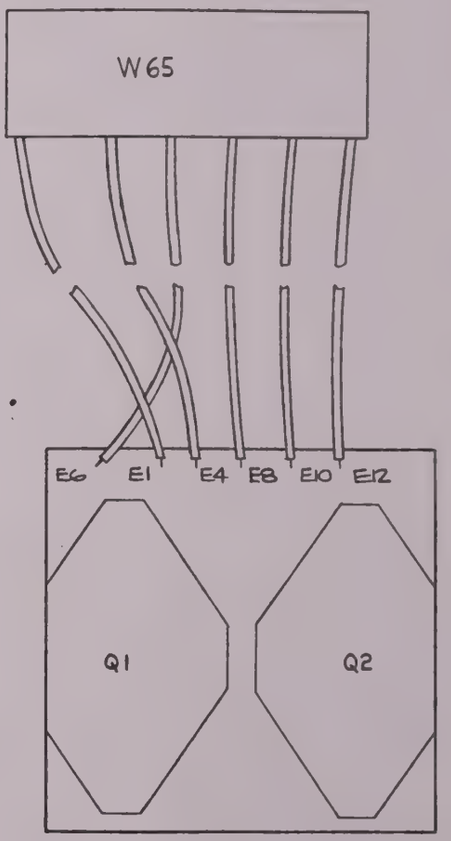

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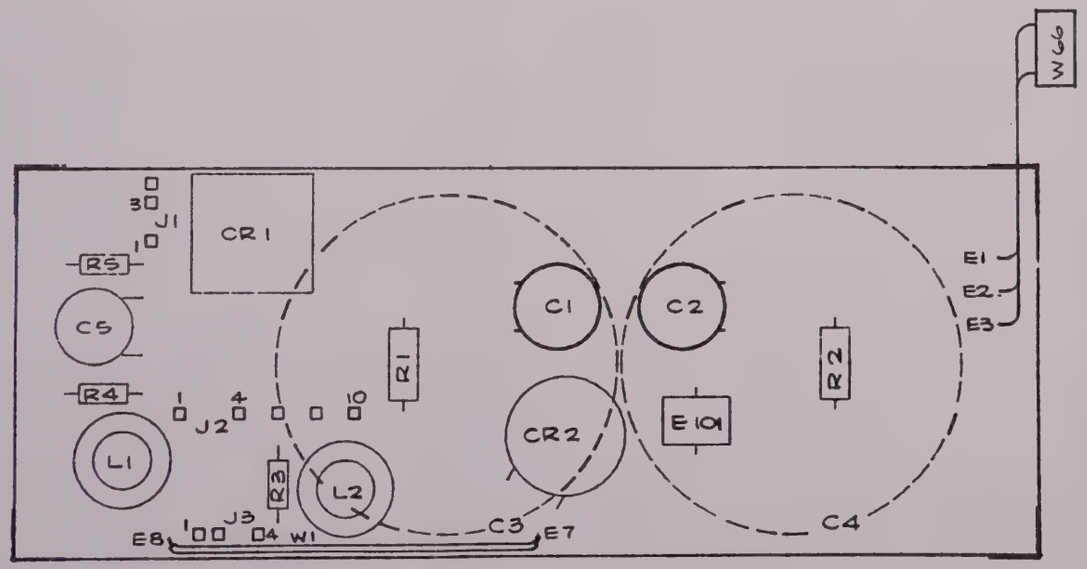

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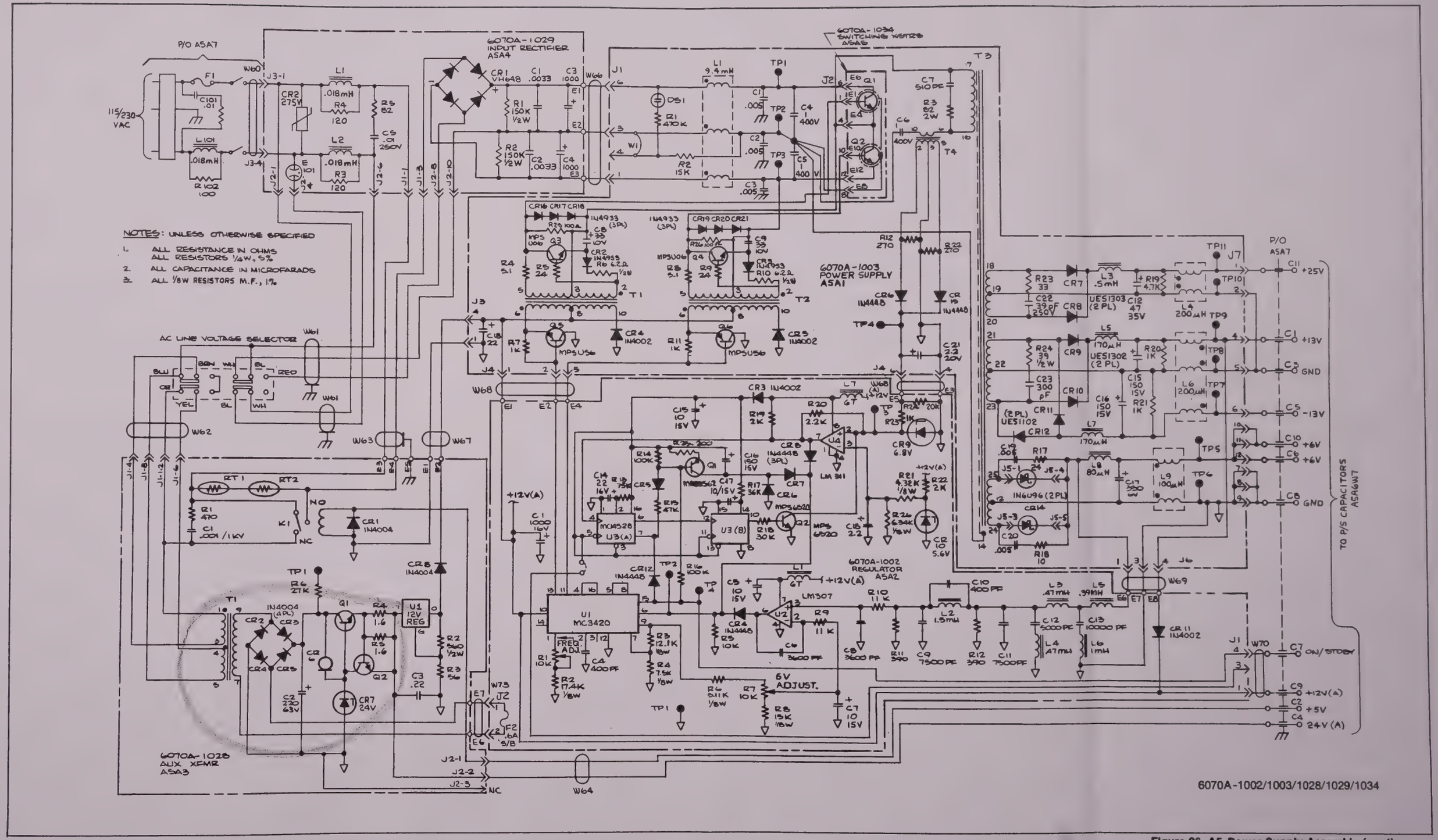
Figure 26. A5 Power Supply Assembly (cont)



6070A-1002/1003/1028/1029/1034

Figure 26. A5 Power Supply Assembly (cont)

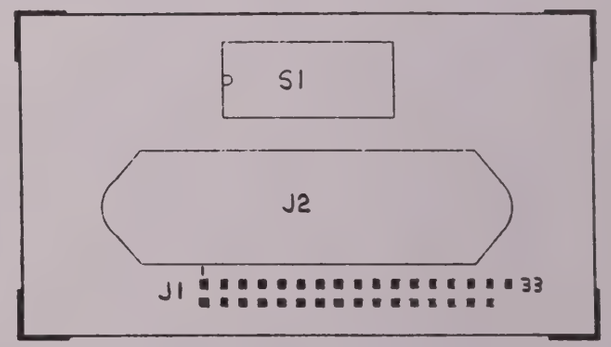


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Figure 27. A6A1 IEEE Connector PCB Assembly

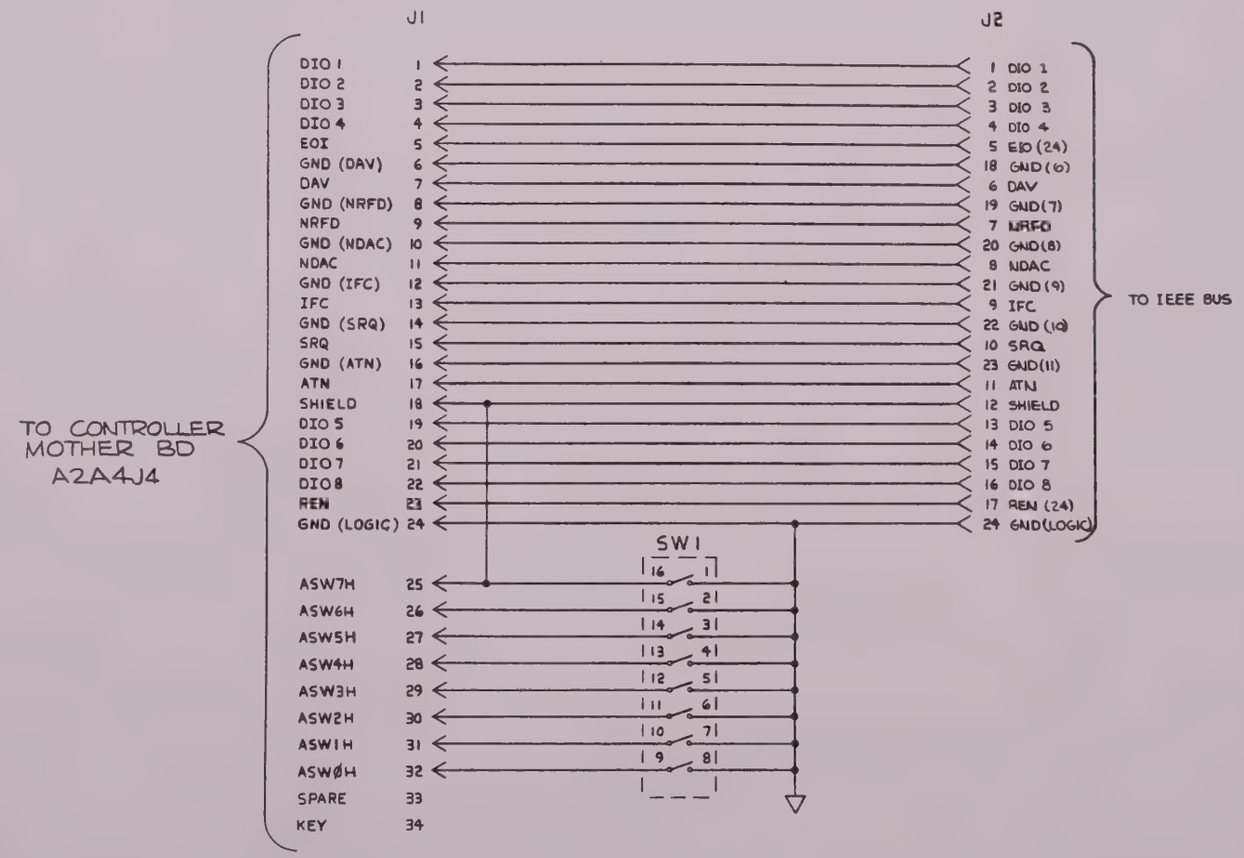

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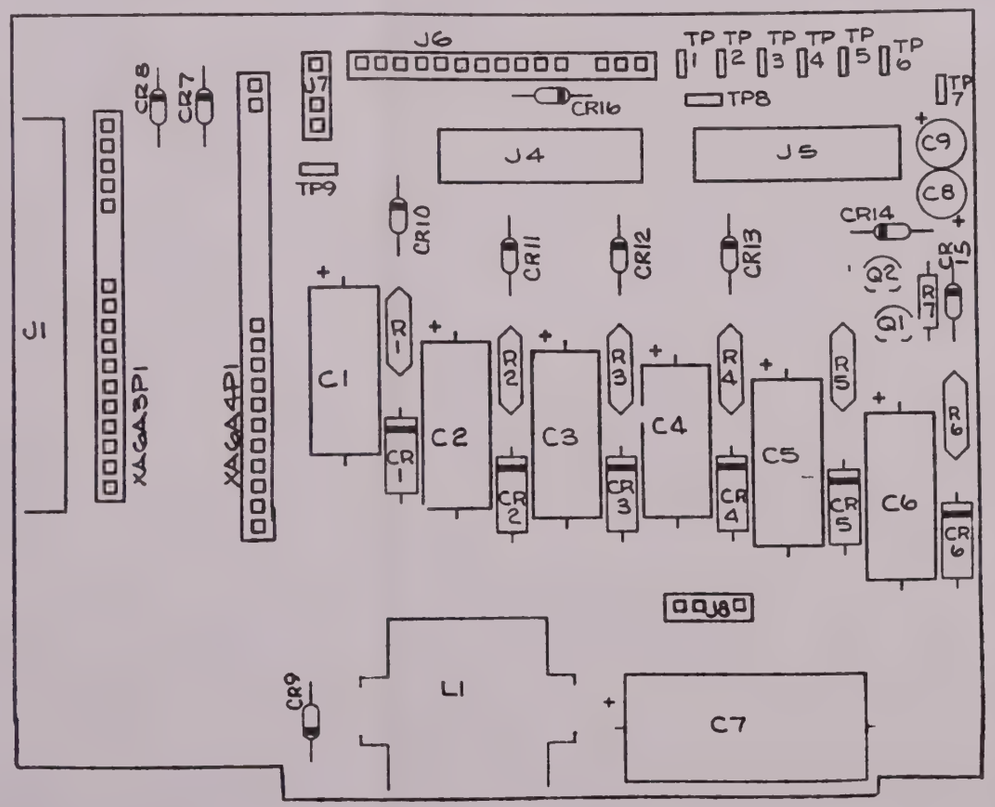
Figure 33. A6A1 IEEE Connector PCB Assembly (cont)



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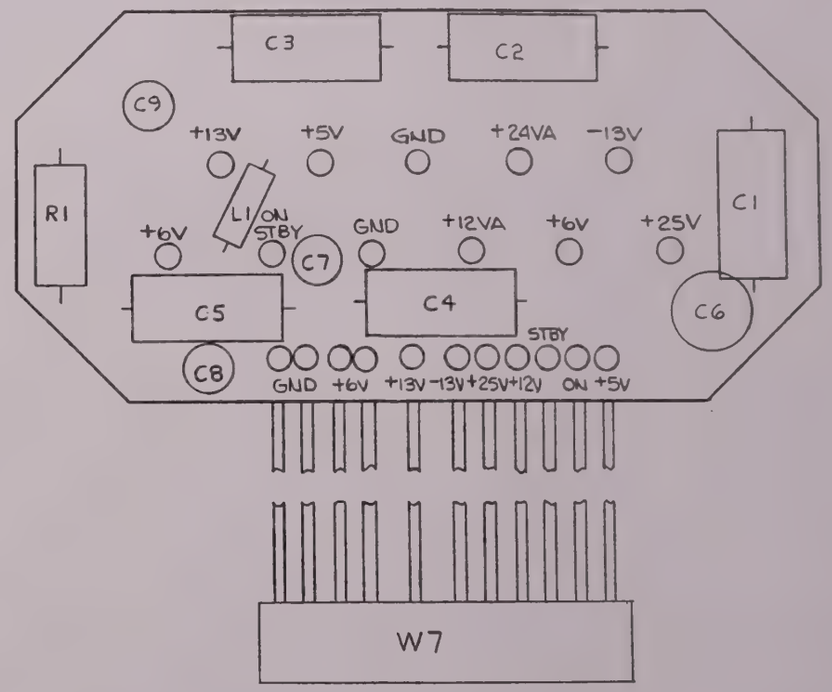

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Figure 28. A6A2 Series Pass Mother Board PCB Assembly (cont)

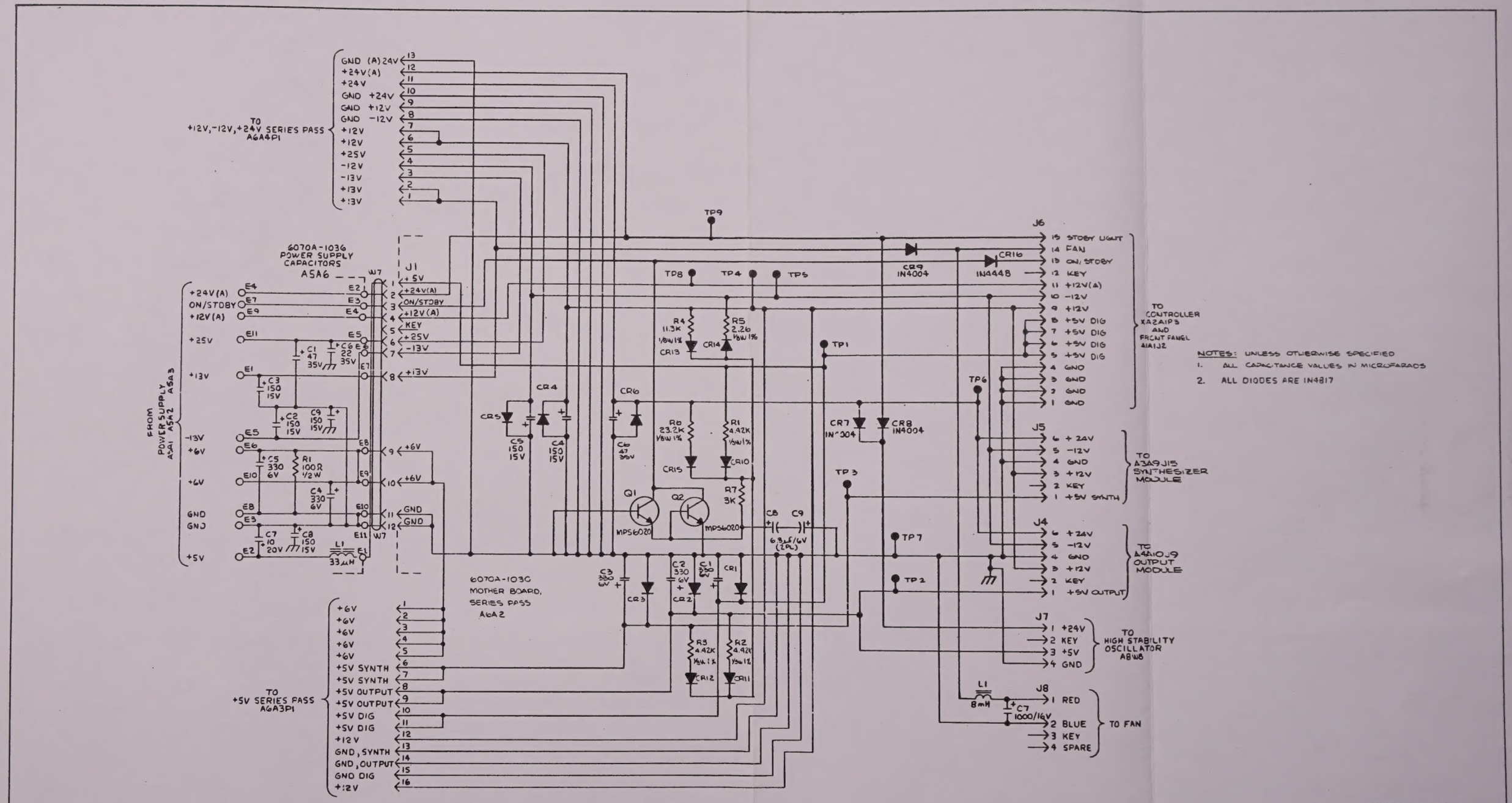

Figure 28. A6A2 Series Pass Mother Board PCB Assembly (cont)

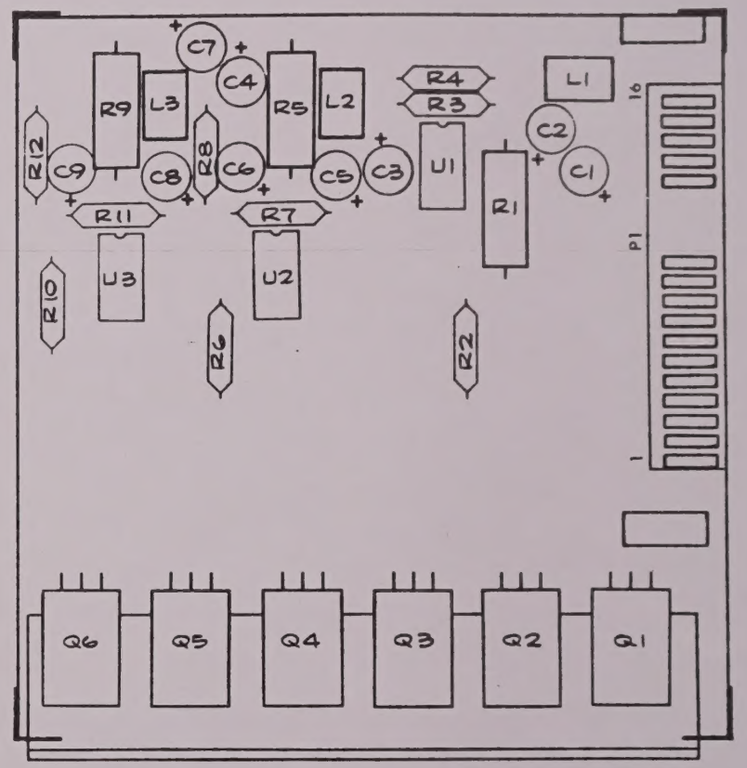

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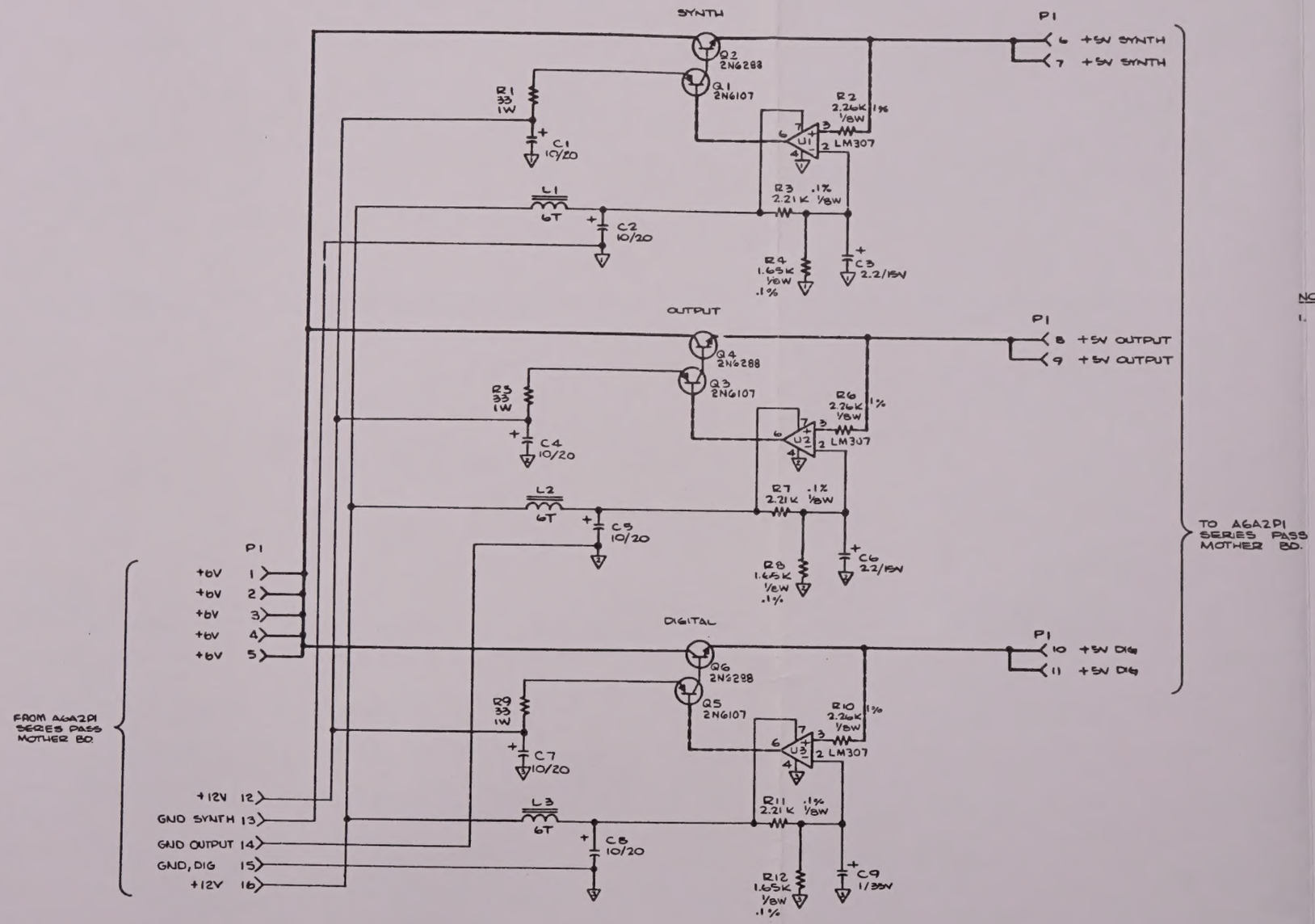
Figure 29. A6A3 +5 Volt Series Pass Regulator PCB Assembly (cont)



NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL RESISTANCE IN OHMS
   ALL CAPACITANCE IN MICROFARADS
   ALL 1/8W RESISTORS ARE M.F.

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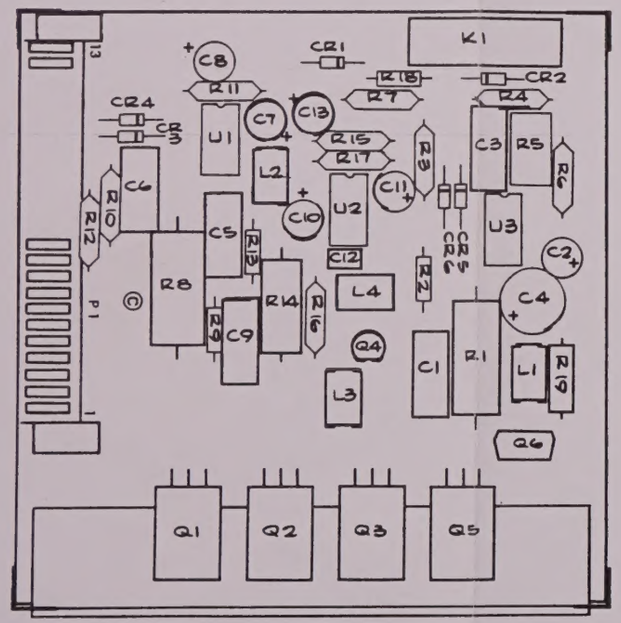
Figure 29. A6A3 +5 Volt Series Pass Regulator PCB Assembly (cont)



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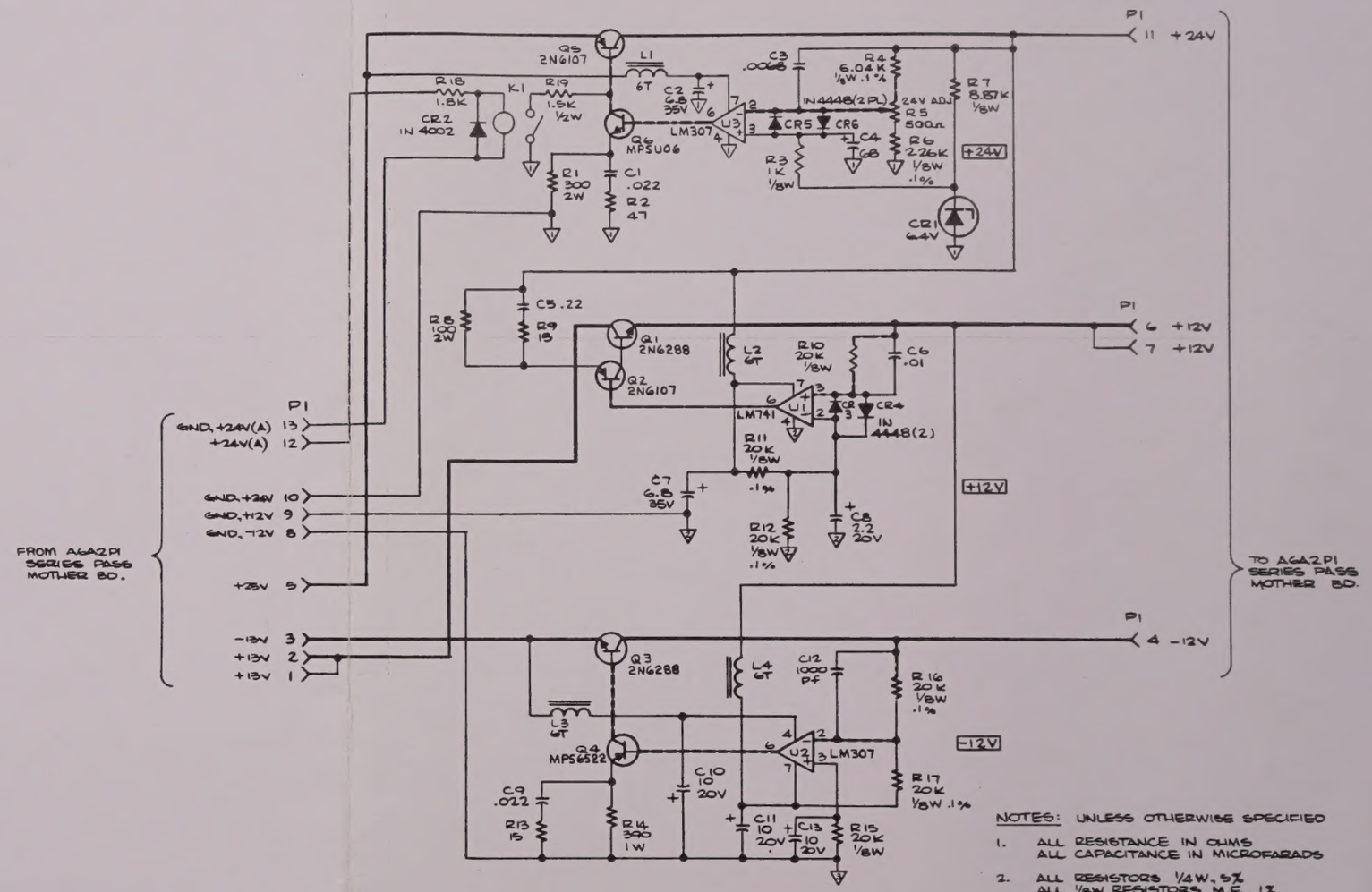

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL RESISTANCE IN OHMS
   ALL CAPACITANCE IN MICROFARADS
2. ALL RESISTORS 1/4W, 5%
   ALL 1/8W RESISTORS M.F., 1%

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Figure 30. A6A4 +12V, -12V, +24V Series Pass Regulator PCB Assembly (cont)